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EXPERIMENTAL WAKE SURVEY BEHIND VIKING '75 ENTRY VEHICLE AT ANGLES OF ATTACK OF 0° AND 5°, MACH NUMBERS FROM 1.60 TO 3.95, AND LONGITUDINAL STATIONS FROM 1.0 TO 8.39 BODY DIAMETERS

by Clarence A. Brown, Jr., James F. Campbell, and Dorothy H. Tudor

Langley Research Center
Hampton, Va. 23365

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16. Abstract

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SUMMARY

An investigation was conducted to obtain flow properties in the wake of the Viking '75 Entry Vehicle at Mach numbers from 1.60 to 3.95 and at angles of attack of 0° and 5°. The wake flow properties were calculated from total and static pressures measured with a pressure rake at longitudinal stations varying from 1.0 to 8.39 body diameters and lateral stations varying from -0.42 to 3.0 body diameters. These measurements showed a consistent trend throughout the range of Mach numbers and longitudinal distances and an increase in dynamic pressure with increasing downstream position.

INTRODUCTION

Investigations have shown that the flow structure behind blunt bodies will affect any object that may be placed in the wake of that body. These flow structures are difficult to predict and the effect on parameters such as drag and stability characteristics of the object within the wake are not well understood. Results of several such investigations to define flow fields behind blunt bodies can be found in references 1 to 5.

Recently, consideration has been given to landing an unmanned, instrumented payload on the planet Mars. The thin atmosphere associated with Mars has resulted in entry designs that have low ballistic coefficients and utilize a parachute as the decelerator system for soft landing on the planet. The parachute would be submerged in the wake of the forebody; therefore, the flow field behind the forebody must be known. The drag of a parachute in free-stream conditions can be obtained readily in wind tunnel and free flight; however, when a parachute is immersed, partially or totally, in the wake of a forebody, the force exerted by the parachute differs from that measured in free stream. To predict the forces the parachute would exert on the forebody, measurements of the flow conditions of the wake must be obtained.

An investigation has been conducted to obtain flow properties in the wake of the Viking '75 Entry Vehicle at Mach numbers from 1.60 to 3.95 and at angles of attack of 0^{o} and 5^{o}. The wake properties were calculated from total and static pressures measured with a pressure rake at longitudinal stations varying from 1.0 to 8.39 body diameters and lateral stations varying from -0.42 to 3.0 body diameters. Free-stream Reynolds number was 5.42×10^{6} per meter (1.65×10^{6} per foot) for the tests.

Tests were made with four different configurations, two 120^{o} included-angle cones, a 140^{o} included-angle cone, and the Viking '75 Entry Vehicle at Mach numbers from 1.60 to 3.95. Reference 5 presents the data for the two 120^{o} included-angle cones and the data presented in this paper cover the Viking Entry Vehicle. This paper and reference 5 are intended to make available, to interested persons, these data without analysis.

SYMBOLS

Values are given in both SI and U.S. Customary Units. The measurements and calculations were made in U.S. Customary Units.

D	cone base diameter, 12.192 centimeters (4.80 inches)
M_l	local Mach number
M_∞	free-stream Mach number
p_l	local static pressure, newtons/meter^2 (pounds/foot^2)
p_∞	free-stream static pressure, newtons/meter^2 (pounds/foot^2)
p_t	total pressure behind a normal shock wave, newtons/meter^2 (pounds/foot^2)
$p_{t,\infty}$	free-stream total pressure, newtons/meter^2 (pounds/foot^2)
q_l	local dynamic pressure, newtons/meter^2 (pounds/foot^2)
q_∞	free-stream dynamic pressure, newtons/meter^2 (pounds/foot^2)
V_l	local velocity, meters/second (feet/second)
V_∞	free-stream velocity, meters/second (feet/second)

x longitudinal distance downstream from model base, centimeters (inches)

y lateral distance from model-rake plane, centimeters (inches)

z vertical distance measured in the model-rake plane at zero angle of attack of the model, centimeters (inches)

α angle of attack of the model center line, degrees

R Reynolds number

T_o stagnation temperature, ^{o}K (^{o}F)

APPARATUS

Wind Tunnel

The tests were conducted in both the low and high Mach number test sections of the Langley Unitary Plan wind tunnel (ref. 6). The test section is a variable-pressure, continuous-flow type. Each test section is approximately 1.2 meters (4 ft) square and 2.1 meters (7.0 ft) long. The nozzle leading to each test section is an asymmetric sliding-block type, which permits a continuous variation of Mach number from approximately 1.5 to 2.9 in the low Mach number test section and from approximately 2.3 to 4.7 in the high Mach number test section.

MODELS AND INSTRUMENTATION

A sketch of the models used in the test program is shown in figure 1. The Viking '75 Entry Vehicle was constructed of polished aluminum and had a base diameter of 12.192 cm (4.80 in.). The Viking '75 Entry Vehicle had a 140^{o} cone that was blunted at the apex. At the maximum diameter of the 140^{o} cone, the edge radius was an exact scale of the Viking Entry Vehicle. The afterbody was composed of frustums of two cones.

The Viking '75 Entry Vehicle was supported in the test section by a horizontal cantilevered strut (fig. 2) having a sharp leading edge and a maximum cross-sectional thickness of about 0.953 cm (0.375 in.). The use of the horizontal cantilevered strut system eliminated the possibility of obtaining schlieren photographs during the tests.

A pressure rake, illustrated in figure 3, was used to perform the wake survey behind the bodies. The rake was 25.40 cm (10.0 in.) high and was composed of 41 total-pressure tubes 0.64 cm (0.25 in.) apart and 21 static-pressure tubes 1.27 cm (0.50 in.)

apart. The rake was connected to a sting which in turn was attached to a standard sting-support system.

The pressures were recorded by using three 48-channel pressure sampling gages. Two gages used to record total pressure had a maximum range of 57 711 N/m^2 (1080 lb/ft^2) absolute. The gage used to record the static pressure had a maximum range of 20 684 N/m^2 (432 lb/ft^2) absolute.

TEST AND ACCURACY

The tests were performed at Mach numbers of 1.60, 2.30, 2.96, and 3.95. The Reynolds number for all tests was 5.42×10^6 per meter (1.65×10^6 per foot). The stagnation dewpoint was maintained at 239° K (-30° F) in order to avoid condensation effects. The test conditions for each configuration were as follows:

M_∞	T_o		$p_{t,\infty}$		q_∞	
	°K	°F	N/m^2	lb/ft^2	N/m^2	lb/ft^2
$\alpha = 0°$						
1.60	339	150	45 055.32	941.0	18 995.53	396.73
2.30	339	150	60 554.16	1264.7	17 932.59	374.53
2.96	339	150	85 844.51	1792.9	15 221.13	317.90
3.95	353	175	152 522.56	3185.5	11 730.18	244.99
$\alpha = 5°$						
1.60	339	150	45 043.35	940.75	18 989.31	396.6
2.30	339	150	60 760.05	1269.0	17 993.88	375.81
2.96	339	150	85 710.45	1790.1	15 197.19	317.40
3.95	353	175	152 493.83	3184.9	11 728.27	244.95

The pressures in the wake of the body were measured by means of electrically actuated pressure scanning valves that record essentially instantaneous values. The rake was mounted vertically in the tunnel and was positioned in a longitudinal direction at stations measured from the maximum diameter of the body. The rake was moved in a lateral direction (y-direction) at three selected longitudinal stations. At the remaining longitudinal stations, the rake was not traversed in a lateral direction (y-direction). A schematic representation of the longitudinal and lateral stations is presented in figure 4.

Accuracy of the pressure scanning valves is within 1 percent of the full scale of the gage; this accuracy includes all errors of linearity, hysteresis, and repeatability. The

free-stream stagnation pressure was measured with a precision mercury manometer, the accuracy of which is ±23.94 N/m^2 (±0.50 lb/ft^2).

The accuracy of the individual quantities is estimated to be within the following limits:

$p_{t,\infty}$, N/m^2 (lb/ft^2)	±526.68 (11.0)
p_l, N/m^2 (lb/ft^2)	±335.16 (7.0)
x, cm (in.)	0.0254 (0.01)
y, cm (in.)	0.0254 (0.01)
M_∞ at 1.60	±0.01
M_∞ at 2.30	±0.015
M_∞ at 2.96	±0.02
M_∞ at 3.95	±0.05

TABULATION OF EXPERIMENTAL DATA

Flow properties calculated from measured total and static pressures in the wake of the Viking '75 Entry Vehicle configuration are presented in tables 1 to 8. The tabulations consist of the local flow properties for Mach number, velocity, static pressure, and dynamic pressure. Each property has been nondimensionalized by its respective free-stream value. The data are identified by the necessary geometric information to determine the longitudinal and lateral position in the flow field aft of the body. The appropriate normal-shock expressions and isentropic flow relations were used in conjunction with the measured total and static pressures to obtain the desired flow properties.

The design of the pressure rake is such that there is a displacement of about 1.27 cm (0.50 in.) between the total- and static-pressure tubes. In order to obtain static- and total-pressure data at the identical location, two sets of data were obtained. Total- and static-pressure data were taken at the identical longitudinal and lateral position by moving the sting to account for the offset between the total- and static-pressure tubes.

PRESENTATION OF DATA

The flow properties calculated from the measured total and static pressures in the wake of the Viking '75 Entry Vehicle configuration are presented in figures 5 to 12 and tables 1 to 8 for Mach numbers of 1.60, 2.30, 2.96, and 3.95 and for body angles of attack of 0° and 5°. These data consist of ratios of local to free-stream conditions of Mach number, velocity, static pressure, and dynamic pressure presented as a function of vertical distance z/D measured from the model-rake center line in the model-rake plane.

Presented in figure 5 and table 1 are the plotted and tabulated flow properties for a Mach number of 1.60, body angle of attack of 0°, x/D distances (longitudinal) varying from 1.0 to 8.39 for y/D = 0, and y/D distances (lateral) varying from -0.42 to 3.0 for three selected x/D distances (x/D = 2.5, 5.0, and 8.39). During the test, one of the static-pressure tubes came unsoldered from the survey rake at z/D = +0.30 causing the static-pressure measurement to be in error at this point. Because of the sequence in which these data were taken and the fact that the tube became unsoldered during the run, only that portion of the curves near z/D = +0.30 is in error and the magnitude of this error can be seen by examination of the same region at z/D = -0.30.

Figure 6 and table 2 present the plotted and tabulated flow properties for a Mach number of 2.30 for the same body angle of attack and x/D and y/D distances as figures 5 and table 1.

Figures 7 and 8 and tables 3 and 4 present the plotted and tabulated flow properties for Mach numbers of 2.96 and 3.95. These data are presented for the same x/D and y/D distances and body angle of attack as figures 5 and 6 and tables 1 and 2 for Mach numbers of 1.60 and 2.30.

Figures 9, 10, 11, and 12 and tables 5, 6, 7, and 8 present the plotted and tabulated flow properties for Mach numbers of 1.60, 2.30, 2.96, and 3.95 for a body angle of attack of 5° and varying x/D distances. During these tests, no attempt was made to traverse the survey pressure rake in a lateral direction (y/D); therefore, the data presented are for model center-line locations at various x/D distances.

The consistent trends established by the static- and dynamic-pressure data throughout the range of Mach number and x/D result in well-defined data curves across the wake; this is particularly important in the wake recompression region where large pressure gradients are predominant. It is believed that these consistent trends, along with the demonstrated repeatability of the data at all test conditions, make the present data a reliable information source in defining the wake structure and flow properties aft of the Viking Entry Vehicle.

Comparison of figures 5, 6, 7, and 8 shows that, for x/D from 1.0 to 4.0, the dynamic pressure ratios q_l/q_∞ at the center line were greater for the higher Mach numbers; however, for x/D $\geqq$ 4.0, q_l/q_∞ becomes greater for the lower Mach numbers tested. When comparing x/D with y/D and z/D equal to zero for all Mach numbers, the highest value shown for the dynamic-pressure ratio occurred at the greatest x/D distance of the test (x/D = 8.39). These dynamic-pressure ratios varied from a maximum of 0.748 for $M_\infty = 1.60$ to 0.3949 for $M_\infty = 3.95$. For these same x/D distances, but at the limit of the measuring rake (z/D = ±1.04), the maximum dynamic-pressure ratio did not occur at the same x/D distance with change in Mach number. For a Mach number of 1.60, little difference in dynamic-pressure ratio is evident between x/D of 4.0

and 8.39. However, at the other test Mach numbers, the maximum dynamic-pressure ratio occurred at x/D of 5.0 for $M_\infty = 2.30$, x/D of 7.0 for $M_\infty = 2.96$, and x/D of 8.39 for $M_\infty = 3.95$.

Comparison of figures 9, 10, 11, and 12 indicates that the effect of a 5° angle of attack of the body near the center line of the wake decreases as x/D increases.

Comparison of the wake data for the Viking Entry Vehicle with the same type of data for the 120° cone of reference 5 indicates that changing the cone angle from 120° to 140°, blunting the 140° apex cone, rounding the edges at the maximum diameter, and adding an afterbody had only a slight effect on the velocity, Mach number, static-pressure, and dynamic-pressure ratios obtained for both configurations. The 120° blunt cone of reference 5 had slightly lower wake pressures than the Viking Entry Vehicle throughout the test Mach number range.

The rake used during the investigation covered a z/D distance of ±1.04 from the body center line. As would be expected, the closer the survey rake is to the base of the body the larger the variation in pressure noted for all Mach numbers. Also for all Mach numbers and all x/D distances of the tests, the dynamic-pressure ratio approached free-stream conditions at the outer edges of the wake, although some pressure loss is shown in that free-stream conditions are not quite obtained within the distance covered by the rake. The exception to this is when the survey rake is placed at a large y/D distance and then the rake will measure the free-stream conditions of the tunnel.

One of the more important parameters for a decelerator system behind a blunt body is the available dynamic pressure. The test data indicate that decelerator systems embedded in the wake of a blunt body should be positioned such that the q_l/q_∞ ratio is not degraded in a manner to make the decelerator system ineffective. Examination of these data indicates that an x/D distance of the order of 4 or greater should be used to decrease the loss of dynamic pressure within the wake of the blunt body.

CONCLUDING REMARKS

An investigation was conducted to obtain flow properties in the wake of the Viking '75 Entry Vehicle at Mach numbers from 1.60 to 3.95 and at angles of attack of 0° and 5°. The wake flow properties were calculated from total and static pressures measured with a pressure rake at longitudinal stations varying from 1.0 to 8.39 body diameters and lateral stations varying from -0.42 to 3.0 body diameters. These measurements showed a consistent trend throughout the range of Mach number and longitudinal stations and an increase in dynamic pressure with increasing downstream position.

Changing the cone angle from 120° to 140°, blunting the 140° apex cone, rounding the edges at the maximum diameter, and adding the Viking afterbody had only a slight

effect on the velocity, Mach number, static-pressure, and dynamic-pressure ratios. The 120° cone of NASA TM X-2139 had slightly lower pressures than the Viking Entry Vehicle throughout the test Mach number range.

Langley Research Center,
National Aeronautics and Space Administration,
Hampton, Va., July 1, 1970.

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TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 10 606.98 N/m2 (221.53 lb/ft^2);
q_∞ = 19 007.70 N/m2 (396.98 lb/ft^2);
$p_{t,\infty}$ = 45 084.05 N/m2 (941.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7309	.8951	1.1066	1.0668
.988	.7191	.8904	1.1128	1.0704
.936	.7072	.8791	1.1149	1.0717
.884	.6889	.8754	1.1273	1.0789
.832	.6706	.8668	1.1370	1.0845
.780	.6576	.8458	1.1340	1.0828
.728	.6447	.8363	1.1389	1.0856
.676	.6123	.8250	1.1607	1.0980
.624	.5800	.6377	1.0485	1.0313
.572	.5703	.2125	.6105	.6879
.520	.5606	.0554	.3143	.3771
.468	.5574	.0033	.0773	.0949
.416	.5541	0.0000	0.0000	0.0000
.364	.5531	0.0000	0.0000	0.0000
.312	.5520	0.0000	0.0000	0.0000
.260	.5552	0.0000	0.0000	0.0000
.208	.5584	0.0000	0.0000	0.0000
.156	.5628	0.0000	0.0000	0.0000
.104	.5660	0.0000	0.0000	0.0000
.052	.5638	0.0000	0.0000	0.0000
0.000	.5735	0.0000	0.0000	0.0000
-.052	.5714	0.0000	0.0000	0.0000
-.104	.5692	0.0000	0.0000	0.0000
-.156	.5628	0.0000	0.0000	0.0000
-.208	.5563	0.0000	0.0000	0.0000
-.260	.5531	.0010	.0426	.0523
-.312	.5498	.0028	.0714	.0876
-.364	.5498	.0028	.0714	.0876
-.416	.5498	.0058	.1025	.1257
-.468	.5563	.0140	.1587	.1938
-.520	.5628	.0631	.3348	.4004
-.572	.5725	.2712	.6883	.7593
-.624	.5822	.6846	1.0844	1.0535
-.676	.6048	.8343	1.1745	1.1056
-.728	.6274	.8487	1.1630	1.0993
-.780	.6533	.8445	1.1369	1.0845
-.832	.6792	.8617	1.1264	1.0784
-.884	.6943	.8691	1.1188	1.0740
-.936	.7094	.8815	1.1147	1.0716
-.988	.7277	.8883	1.1049	1.0658
-1.040	.7460	.8985	1.0974	1.0613

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 10 627.25 N/m2 (221.95 lb/ft^2);
q_∞ = 19 044.04 N/m2 (397.74 lb/ft^2);
$p_{t,\infty}$ = 45 170.24 N/m2 (943.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9533	.9483	.9974	.9983
.988	.9468	.9328	.9926	.9951
.936	.9404	.9206	.9894	.9930
.884	.8940	.9203	1.0146	1.0096
.832	.8476	.9116	1.0370	1.0240
.780	.8013	.8995	1.0595	1.0382
.728	.7549	.9023	1.0933	1.0588
.676	.7204	.8881	1.1104	1.0690
.624	.6859	.8524	1.1148	1.0716
.572	.6535	.6552	1.0013	1.0009
.520	.6212	.3847	.7870	.8432
.468	.6201	.1857	.5473	.6267
.416	.6190	.0689	.3335	.3989
.364	.6179	.0198	.1790	.2183
.312	.6168	.0057	.0960	.1178
.260	.6233	0.0000	0.0000	0.0000
.208	.6298	0.0000	0.0000	0.0000
.156	.6330	0.0000	0.0000	0.0000
.104	.6395	0.0000	0.0000	0.0000
.052	.6341	0.0000	0.0000	0.0000
0.000	.6492	0.0000	0.0000	0.0000
-.052	.6438	0.0000	0.0000	0.0000
-.104	.6384	0.0000	0.0000	0.0000
-.156	.6309	0.0000	0.0000	0.0000
-.208	.6233	0.0000	0.0000	0.0000
-.260	.6190	0.0000	0.0000	0.0000
-.312	.6147	.0112	.1353	.1656
-.364	.6190	.0205	.1822	.2222
-.416	.6233	.0909	.3818	.4529
-.468	.6309	.2114	.5788	.6576
-.520	.6384	.4200	.8111	.8626
-.572	.6675	.7439	1.0556	1.0358
-.624	.6966	.8695	1.1172	1.0730
-.676	.7538	.8831	1.0823	1.0522
-.728	.8110	.8900	1.0476	1.0307
-.780	.8465	.9038	1.0332	1.0216
-.832	.8821	.9109	1.0162	1.0106
-.884	.8692	.9264	1.0324	1.0211
-.936	.8563	.9435	1.0497	1.0321
-.988	.8099	.9497	1.0829	1.0525
-1.040	.7635	.9541	1.1179	1.0734

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 10\ 627.25$ N/m^2 (221.95 lb/ft^2);
$q_\infty = 19\ 044.04$ N/m^2 (397.74 lb/ft^2);
$p_{t,\infty} = 45\ 170.24$ N/m^2 (943.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7549	.9034	1.0940	1.0593
.988	.7430	.9071	1.1049	1.0658
.936	.7312	.8941	1.1058	1.0663
.884	.7150	.8885	1.1148	1.0716
.832	.6988	.8995	1.1345	1.0831
.780	.7258	.8851	1.1043	1.0654
.728	.7527	.8905	1.0877	1.0555
.676	.7689	.8978	1.0806	1.0511
.624	.7851	.8984	1.0697	1.0445
.572	.7969	.8964	1.0606	1.0388
.520	.8088	.8444	1.0218	1.0143
.468	.8088	.6164	.8730	.9104
.416	.8088	.3369	.6454	.7205
.364	.8066	.1899	.4853	.5637
.312	.8045	.1013	.3549	.4230
.260	.8045	.0531	.2570	.3108
.208	.8045	.0130	.1271	.1557
.156	.8120	0.0000	0.0000	0.0000
.104	.8120	0.0000	0.0000	0.0000
.052	.8066	0.0000	0.0000	0.0000
0.000	.8196	0.0000	0.0000	0.0000
-.052	.8142	.0022	.0515	.0633
-.104	.8088	.0140	.1317	.1612
-.156	.8056	.0158	.1400	.1713
-.208	.8023	.0320	.1997	.2431
-.260	.7969	.0461	.2405	.2915
-.312	.7915	.1098	.3725	.4426
-.364	.8023	.1933	.4909	.5695
-.416	.8131	.3946	.6967	.7667
-.468	.8066	.6880	.9235	.9474
-.520	.8002	.8719	1.0439	1.0284
-.572	.7797	.8936	1.0706	1.0450
-.624	.7592	.9003	1.0890	1.0563
-.676	.7473	.8957	1.0948	1.0597
-.728	.7355	.8944	1.1028	1.0645
-.780	.7333	.8815	1.0964	1.0607
-.832	.7312	.8918	1.1044	1.0655
-.884	.7376	.8907	1.0989	1.0622
-.936	.7441	.8995	1.0995	1.0626
-.988	.7657	.9059	1.0877	1.0555
-1.040	.7872	.9022	1.0706	1.0450

(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^o$;

$p_\infty = 10\ 605.85$ N/m^2 (221.51 lb/ft^2);
$q_\infty = 19\ 005.69$ N/m^2 (396.94 lb/ft^2);
$p_{t,\infty} = 45\ 079.26$ N/m^2 (941.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0844	1.0095	.9648	.9763
.988	1.0898	1.0069	.9612	.9738
.936	1.0952	1.0093	.9600	.9730
.884	1.0920	1.0065	.9601	.9730
.832	1.0887	1.0037	.9602	.9731
.780	1.0736	1.0164	.9730	.9819
.728	1.0585	1.0174	.9804	.9869
.676	1.0596	1.0089	.9758	.9838
.624	1.0606	1.0103	.9760	.9839
.572	1.0606	1.0120	.9768	.9845
.520	1.0606	1.0053	.9736	.9823
.468	1.0725	1.0083	.9696	.9796
.416	1.0844	.9995	.9600	.9730
.364	1.0120	1.0138	1.0009	1.0006
.312	.9397	1.0196	1.0416	1.0270
.260	.9926	1.0172	1.0123	1.0081
.208	1.0455	1.0046	.9802	.9868
.156	1.0056	1.0199	1.0071	1.0047
.104	1.0585	1.0057	.9747	.9831
.052	1.0628	1.0083	.9740	.9826
0.000	1.0714	.9967	.9645	.9761
-.052	1.0758	1.0040	.9661	.9772
-.104	1.0801	.9966	.9606	.9734
-.156	1.0790	1.0085	.9668	.9776
-.208	1.0779	.9987	.9625	.9747
-.260	1.0790	1.0101	.9676	.9782
-.312	1.0801	1.0066	.9654	.9767
-.364	1.0866	1.0121	.9652	.9765
-.416	1.0930	1.0043	.9586	.9720
-.468	1.0920	1.0162	.9647	.9762
-.520	1.0909	1.0097	.9621	.9744
-.572	1.0941	1.0141	.9628	.9749
-.624	1.0974	1.0036	.9563	.9705
-.676	1.0952	1.0090	.9598	.9729
-.728	1.0930	1.0043	.9586	.9720
-.780	1.1028	1.0076	.9559	.9702
-.832	1.1125	1.0042	.9501	.9661
-.884	1.1125	1.0059	.9509	.9667
-.936	1.1125	1.0109	.9532	.9683
-.988	1.1114	1.0077	.9522	.9676
-1.040	1.1103	1.0063	.9520	.9675

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^o$;

p_∞ = 10 608.10 N/m^2 (221.55 lb/ft^2);
q_∞ = 19 009.72 N/m^2 (397.03 lb/ft^2);
$p_{t,\infty}$ = 45 088.84 N/m^2 (941.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8674	.9708	1.0579	1.0372
.988	.8718	.9817	1.0612	1.0392
.936	.8761	.9677	1.0510	1.0329
.884	.8696	.9704	1.0564	1.0362
.832	.8631	.9665	1.0582	1.0374
.780	.8631	.9533	1.0509	1.0328
.728	.8631	.9533	1.0509	1.0328
.676	.8480	.9525	1.0598	1.0384
.624	.8329	.9567	1.0717	1.0457
.572	.8362	.9528	1.0675	1.0431
.520	.8394	.9540	1.0661	1.0422
.468	.8329	.9517	1.0689	1.0440
.416	.8264	.9561	1.0756	1.0481
.364	.7747	.9598	1.1131	1.0706
.312	.7229	.9683	1.1574	1.0961
.260	.7703	.9572	1.1147	1.0716
.208	.8178	.9493	1.0774	1.0492
.156	.7703	.9555	1.1137	1.0710
.104	.8178	.9493	1.0774	1.0492
.052	.8178	.9476	1.0764	1.0486
0.000	.8178	.9626	1.0849	1.0538
-.052	.8178	.9452	1.0751	1.0478
-.104	.8178	.9502	1.0779	1.0495
-.156	.8221	.9462	1.0728	1.0464
-.208	.8264	.9471	1.0705	1.0450
-.260	.8243	.9474	1.0721	1.0460
-.312	.8221	.9495	1.0747	1.0475
-.364	.8275	.9486	1.0706	1.0451
-.416	.8329	.9477	1.0667	1.0426
-.468	.8351	.9473	1.0651	1.0416
-.520	.8372	.9519	1.0663	1.0424
-.572	.8448	.9506	1.0608	1.0390
-.624	.8523	.9626	1.0627	1.0402
-.676	.8588	.9532	1.0535	1.0345
-.728	.8653	.9637	1.0554	1.0356
-.780	.8696	.9564	1.0497	1.0314
-.832	.8739	.9656	1.0511	1.0330
-.884	.8782	.9615	1.0464	1.0299
-.936	.8825	.9691	1.0479	1.0309
-.988	.8890	.9696	1.0444	1.0287
-1.040	.8955	.9719	1.0418	1.0270

(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^o$;

p_∞ = 10 620.50 N/m^2 (221.81 lb/ft^2);
q_∞ = 19 031.93 N/m^2 (397.49 lb/ft^2);
$p_{t,\infty}$ = 45 141.51 N/m^2 (942.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7884	.9496	1.0975	1.0613
.988	.7917	.9391	1.0892	1.0564
.936	.7949	.9485	1.0924	1.0583
.884	.7906	.9344	1.0871	1.0551
.832	.7863	.9334	1.0896	1.0566
.780	.7906	.9277	1.0833	1.0528
.728	.7949	.9270	1.0799	1.0507
.676	.7787	.9264	1.0907	1.0573
.624	.7625	.9291	1.1038	1.0652
.572	.7593	.9280	1.1055	1.0662
.520	.7560	.9285	1.1082	1.0677
.468	.7549	.9254	1.1071	1.0671
.416	.7539	.9256	1.1080	1.0676
.364	.7009	.9343	1.1545	1.0945
.312	.6480	.9396	1.2041	1.1217
.260	.6945	.9320	1.1585	1.0967
.208	.7409	.9244	1.1170	1.0729
.156	.6945	.9320	1.1585	1.0967
.104	.7409	.9244	1.1170	1.0729
.052	.7398	.9246	1.1179	1.0734
0.000	.7409	.9244	1.1170	1.0729
-.052	.7398	.9173	1.1135	1.0709
-.104	.7387	.9192	1.1154	1.0720
-.156	.7377	.9193	1.1164	1.0725
-.208	.7366	.9195	1.1173	1.0731
-.260	.7377	.9193	1.1164	1.0725
-.312	.7387	.9208	1.1164	1.0726
-.364	.7409	.9204	1.1146	1.0715
-.416	.7431	.9234	1.1148	1.0716
-.468	.7485	.9225	1.1102	1.0689
-.520	.7539	.9232	1.1067	1.0668
-.572	.7582	.9242	1.1041	1.0653
-.624	.7625	.9251	1.1015	1.0637
-.676	.7657	.9262	1.0998	1.0627
-.728	.7690	.9290	1.0991	1.0623
-.780	.7733	.9299	1.0966	1.0608
-.832	.7776	.9309	1.0941	1.0593
-.884	.7819	.9351	1.0935	1.0590
-.936	.7863	.9360	1.0911	1.0575
-.988	.7927	.9366	1.0869	1.0550
-1.040	.7992	.9520	1.0914	1.0577

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(g) x/D = 2.5; y/D = 1.0; $\alpha = 0^o$;

p_∞ = 10 620.50 N/m^2 (221.81 lb/ft^2);
q_∞ = 19 031.93 N/m^2 (397.49 lb/ft^2);
$p_{t,\infty}$ = 45 141.51 N/m^2 (942.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7336	.9251	1.1230	1.0764
.988	.7368	.9147	1.1141	1.0712
.936	.7401	.9174	1.1134	1.0708
.884	.7379	.9078	1.1092	1.0683
.832	.7358	.9049	1.1090	1.0682
.780	.7455	.9000	1.0987	1.0621
.728	.7552	.9000	1.0917	1.0579
.676	.7422	.9005	1.1015	1.0637
.624	.7293	.9060	1.1146	1.0715
.572	.7368	.9080	1.1101	1.0689
.520	.7444	.9134	1.1077	1.0674
.468	.7638	.9135	1.0936	1.0590
.416	.7832	.9169	1.0820	1.0520
.364	.7746	.9200	1.0898	1.0567
.312	.7660	.9264	1.0997	1.0627
.260	.7940	.9283	1.0813	1.0516
.208	.8221	.9269	1.0619	1.0396
.156	.7994	.9341	1.0809	1.0514
.104	.8275	.9293	1.0598	1.0383
.052	.8138	.9358	1.0690	1.0441
0.000	.8329	.9334	1.0586	1.0376
-.052	.8242	.9280	1.0611	1.0392
-.104	.8156	.9278	1.0666	1.0426
-.156	.8091	.9206	1.0667	1.0426
-.208	.8027	.9217	1.0716	1.0457
-.260	.7865	.9178	1.0803	1.0510
-.312	.7703	.9123	1.0883	1.0558
-.364	.7541	.9083	1.0975	1.0614
-.416	.7379	.9044	1.1071	1.0671
-.468	.7347	.9000	1.1068	1.0669
-.520	.7315	.8956	1.1065	1.0667
-.572	.7185	.8961	1.1168	1.0728
-.624	.7056	.8982	1.1283	1.0795
-.676	.7066	.8981	1.1273	1.0789
-.728	.7077	.8979	1.1264	1.0784
-.780	.7120	.8988	1.1235	1.0767
-.832	.7164	.8998	1.1207	1.0751
-.884	.7174	.9029	1.1218	1.0757
-.936	.7185	.9043	1.1219	1.0758
-.988	.7239	.9084	1.1202	1.0748
-1.040	.7293	.9125	1.1186	1.0738

(h) x/D = 2.5; y/D = 0.83; $\alpha = 0^o$;

p_∞ = 10 614.86 N/m^2 (221.70 lb/ft^2);
q_∞ = 19 021.83 N/m^2 (397.28 lb/ft^2);
$p_{t,\infty}$ = 45 117.57 N/m^2 (942.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7254	.9221	1.1275	1.0790
.988	.7351	.9238	1.1210	1.0753
.936	.7448	.9305	1.1177	1.0733
.884	.7610	.9294	1.1051	1.0659
.832	.7772	.9201	1.0881	1.0557
.780	.8290	.9330	1.0609	1.0390
.728	.8808	.9242	1.0243	1.0159
.676	.8830	.9504	1.0375	1.0243
.624	.8851	.9417	1.0315	1.0205
.572	.9024	.9571	1.0299	1.0194
.520	.9197	.9391	1.0105	1.0069
.468	.9402	.9472	1.0038	1.0025
.416	.9607	.9470	.9929	.9953
.364	.9704	.9437	.9861	.9908
.312	.9801	.9370	.9777	.9851
.260	.9736	.9414	.9833	.9889
.208	.9672	.9459	.9889	.9926
.156	.9823	.9449	.9808	.9872
.104	.9758	.9444	.9838	.9892
.052	.9704	.9453	.9870	.9913
0.000	.9844	.9412	.9778	.9852
-.052	.9790	.9401	.9799	.9866
-.104	.9736	.9361	.9805	.9870
-.156	.9682	.9387	.9846	.9897
-.208	.9628	.9380	.9870	.9913
-.260	.9456	.9376	.9958	.9972
-.312	.9283	.9340	1.0031	1.0020
-.364	.9089	.9324	1.0128	1.0084
-.416	.8894	.9307	1.0229	1.0150
-.468	.8635	.9235	1.0342	1.0222
-.520	.8376	.9147	1.0450	1.0291
-.572	.7934	.9106	1.0713	1.0455
-.624	.7491	.9097	1.1020	1.0641
-.676	.7351	.9005	1.1068	1.0669
-.728	.7210	.8979	1.1159	1.0723
-.780	.7157	.8938	1.1176	1.0732
-.832	.7103	.8947	1.1224	1.0760
-.884	.7049	.8956	1.1272	1.0789
-.936	.6995	.8965	1.1321	1.0817
-.988	.7038	.8974	1.1292	1.0800
-1.040	.7081	.9017	1.1284	1.0796

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) x/D = 2.5; y/D = 0.63; $\alpha = 0^\circ$;

p_∞ = 10 612.61 N/m2 (221.65 lb/ft2);
q_∞ = 19 017.80 N/m2 (397.19 lb/ft2);
$p_{t,\infty}$ = 45 107.99 N/m2 (942.10 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8939	.9467	1.0291	1.0189
.988	.9080	.9526	1.0243	1.0159
.936	.9220	.9435	1.0116	1.0076
.884	.9328	.9500	1.0092	1.0060
.832	.9436	.9481	1.0024	1.0016
.780	.9576	.9457	.9937	.9958
.728	.9717	.9449	.9861	.9908
.676	.9954	.9441	.9739	.9825
.624	1.0192	.9433	.9620	.9744
.572	1.0429	.9474	.9531	.9682
.520	1.0667	.9415	.9395	.9587
.468	1.0850	.9416	.9315	.9531
.416	1.1034	.9315	.9188	.9441
.364	1.0602	.9360	.9396	.9588
.312	1.0170	.9302	.9564	.9705
.260	1.0527	.9121	.9309	.9526
.208	1.0883	.8956	.9072	.9356
.156	1.0645	.8864	.9125	.9395
.104	1.1002	.8698	.8892	.9225
.052	1.0958	.8588	.8852	.9196
0.000	1.1120	.8507	.8746	.9117
-.052	1.1077	.8619	.8821	.9172
-.104	1.1034	.8779	.8920	.9245
-.156	1.1077	.8872	.8949	.9267
-.208	1.1120	.9031	.9012	.9313
-.260	1.0969	.9227	.9171	.9429
-.312	1.0818	.9288	.9266	.9496
-.364	1.0775	.9379	.9330	.9541
-.416	1.0732	.9387	.9352	.9557
-.468	1.0548	.9420	.9450	.9626
-.520	1.0365	.9402	.9524	.9678
-.572	1.0116	.9430	.9655	.9768
-.624	.9868	.9423	.9772	.9848
-.676	.9760	.9442	.9836	.9891
-.728	.9652	.9378	.9857	.9905
-.780	.9479	.9408	.9962	.9975
-.832	.9307	.9388	1.0044	1.0029
-.884	.9188	.9458	1.0146	1.0096
-.936	.9069	.9479	1.0223	1.0146
-.988	.9091	.9475	1.0209	1.0137
-1.040	.9112	.9438	1.0177	1.0116

(j) x/D = 2.5; y/D = 0.42; $\alpha = 0^\circ$;

p_∞ = 10 614.86 N/m2 (221.70 lb/ft2);
q_∞ = 19 021.83 N/m2 (397.28 lb/ft2);
$p_{t,\infty}$ = 45 117.57 N/m2 (942.30 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8256	.9324	1.0627	1.0402
.988	.8450	.9374	1.0532	1.0343
.936	.8645	.9324	1.0385	1.0250
.884	.8839	.9341	1.0280	1.0182
.832	.9034	.9374	1.0186	1.0122
.780	.9358	.9368	1.0005	1.0003
.728	.9682	.9378	.9842	.9894
.676	.9974	.9377	.9696	.9796
.624	1.0266	.9359	.9548	.9694
.572	1.0547	.9376	.9428	.9611
.520	1.0828	.9241	.9238	.9476
.468	1.0947	.9069	.9102	.9378
.416	1.1065	.8643	.8838	.9185
.364	1.0622	.8085	.8724	.9100
.312	1.0179	.7153	.8383	.8840
.260	1.0385	.6102	.7665	.8264
.208	1.0590	.5000	.6871	.7582
.156	1.0493	.4197	.6325	.7085
.104	1.0698	.3669	.5856	.6642
.052	1.0644	.3442	.5687	.6477
0.000	1.0806	.3221	.5460	.6253
-.052	1.0752	.2955	.5242	.6035
-.104	1.0698	.3997	.6113	.6886
-.156	1.0709	.4709	.6631	.7367
-.208	1.0720	.5725	.7308	.7963
-.260	1.0763	.6875	.7992	.8531
-.312	1.0806	.7904	.8552	.8970
-.364	1.0849	.8570	.8888	.9222
-.416	1.0893	.9049	.9115	.9388
-.468	1.0730	.9246	.9283	.9508
-.520	1.0568	.9276	.9368	.9569
-.572	1.0233	.9335	.9551	.9696
-.624	.9898	.9361	.9725	.9815
-.676	.9671	.9384	.9850	.9900
-.728	.9445	.9291	.9918	.9946
-.780	.9120	.9347	1.0123	1.0081
-.832	.8796	.9270	1.0266	1.0173
-.884	.8591	.9305	1.0407	1.0264
-.936	.8386	.9356	1.0563	1.0362
-.988	.8364	.9310	1.0550	1.0354
-1.040	.8342	.9314	1.0566	1.0364

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(k) x/D = 2.5; y/D = 0.21; $\alpha = 0^o$;

p_∞ = 10 610.36 N/m^2 (221.60 lb/ft^2);
q_∞ = 19 013.76 N/m^2 (397.11 lb/ft^2);
$p_{t,\infty}$ = 45 098.42 N/m^2 (941.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7667	.9195	1.0951	1.0599
.988	.7969	.9194	1.0741	1.0472
.936	.8272	.9259	1.0580	1.0372
.884	.8585	.9306	1.0411	1.0266
.832	.8898	.9302	1.0224	1.0147
.780	.9254	.9274	1.0010	1.0007
.728	.9611	.9295	.9834	.9890
.676	.9956	.9335	.9683	.9787
.624	1.0302	.9307	.9505	.9664
.572	1.0572	.9275	.9367	.9568
.520	1.0842	.8992	.9107	.9382
.468	1.0745	.8572	.8932	.9254
.416	1.0648	.7322	.8292	.8769
.364	1.0486	.5631	.7328	.7980
.312	1.0324	.4057	.6269	.7033
.260	1.0432	.2578	.4971	.5759
.208	1.0540	.1511	.3787	.4494
.156	1.0648	.0774	.2697	.3256
.104	1.0756	.0551	.2264	.2748
.052	1.0669	.0397	.1930	.2351
0.000	1.0971	.0438	.1998	.2432
-.052	1.0885	.0583	.2314	.2808
-.104	1.0799	.0683	.2516	.3045
-.156	1.0702	.1111	.3222	.3861
-.208	1.0604	.1985	.4326	.5082
-.260	1.0561	.3292	.5583	.6375
-.312	1.0518	.4878	.6810	.7528
-.364	1.0572	.6341	.7745	.8330
-.416	1.0626	.8285	.8830	.9179
-.468	1.0626	.8856	.9129	.9398
-.520	1.0626	.9157	.9283	.9508
-.572	1.0248	.9242	.9496	.9658
-.624	.9870	.9309	.9711	.9806
-.676	.9654	.9297	.9813	.9875
-.728	.9438	.9234	.9892	.9928
-.780	.9114	.9257	1.0078	1.0052
-.832	.8790	.9197	1.0229	1.0150
-.884	.8326	.9276	1.0555	1.0357
-.936	.7861	.9238	1.0840	1.0533
-.988	.7775	.9137	1.0840	1.0533
-1.040	.7689	.9168	1.0920	1.0580

(l) x/D = 2.5; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 10 611.48 N/m^2 (221.63 lb/ft^2);
q_∞ = 19 015.78 N/m^2 (397.15 lb/ft^2);
$p_{t,\infty}$ = 45 103.20 N/m^2 (942.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7028	.9051	1.1349	1.0833
.988	.7417	.9169	1.1118	1.0699
.936	.7806	.9104	1.0799	1.0508
.884	.8033	.9066	1.0623	1.0399
.832	.8260	.9227	1.0569	1.0365
.780	.8758	.9175	1.0236	1.0154
.728	.9255	.9239	.9991	.9994
.676	.9623	.9275	.9818	.9878
.624	.9990	.9244	.9619	.9743
.572	1.0347	.9281	.9471	.9640
.520	1.0704	.9150	.9246	.9482
.468	1.0715	.8963	.9146	.9410
.416	1.0726	.8305	.8800	.9156
.364	1.0704	.6900	.8029	.8560
.312	1.0682	.5674	.7288	.7946
.260	1.0747	.4090	.6169	.6940
.208	1.0812	.3158	.5404	.6198
.156	1.0963	.2687	.4951	.5738
.104	1.1028	.2841	.5075	.5866
.052	1.0877	.2720	.5001	.5790
0.000	1.1245	.2646	.4851	.5635
-.052	1.1093	.2911	.5123	.5915
-.104	1.0942	.2658	.4929	.5715
-.156	1.0953	.2334	.4616	.5390
-.208	1.0963	.2872	.5118	.5909
-.260	1.0877	.4248	.6250	.7015
-.312	1.0790	.5562	.7180	.7853
-.364	1.0780	.7240	.8195	.8693
-.416	1.0769	.8661	.8968	.9281
-.468	1.0617	.9141	.9279	.9505
-.520	1.0466	.9218	.9385	.9580
-.572	1.0066	.9223	.9572	.9711
-.624	.9666	.9260	.9788	.9858
-.676	.9352	.9265	.9953	.9969
-.728	.9039	.9153	1.0063	1.0041
-.780	.8596	.9130	1.0306	1.0199
-.832	.8152	.9072	1.0549	1.0353
-.884	.7904	.9081	1.0719	1.0459
-.936	.7655	.9139	1.0927	1.0585
-.988	.7320	.9096	1.1147	1.0716
-1.040	.6985	.9036	1.1374	1.0847

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(m) x/D = 2.5; y/D = -0.42; $\alpha = 0^o$;

p_∞ = 10 614.86 N/m^2 (221.70 lb/ft^2);
q_∞ = 19 021.83 N/m^2 (397.28 lb/ft^2);
$p_{t,\infty}$ = 45 117.57 N/m^2 (942.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6096	.8936	1.2107	1.1252
.988	.6161	.8909	1.2025	1.1209
.936	.6226	.8816	1.1900	1.1141
.884	.5999	.8688	1.2034	1.1213
.832	.5772	.8691	1.2271	1.1338
.780	.6777	.8892	1.1454	1.0893
.728	.7782	.8940	1.0718	1.0458
.676	.8106	.9051	1.0567	1.0364
.624	.8431	.9046	1.0358	1.0233
.572	.8809	.9114	1.0172	1.0113
.520	.9187	.9015	.9906	.9938
.468	.9393	.9063	.9823	.9882
.416	.9598	.9044	.9707	.9803
.364	.9630	.9038	.9687	.9790
.312	.9663	.8999	.9650	.9764
.260	.9868	.8996	.9548	.9694
.208	1.0074	.8859	.9378	.9575
.156	1.0063	.8710	.9304	.9523
.104	1.0268	.8404	.9047	.9338
.052	1.0214	.7673	.8667	.9057
0.000	1.0463	.6929	.8138	.8647
-.052	1.0409	.7682	.8591	.8999
-.104	1.0355	.8382	.8997	.9302
-.156	1.0387	.8561	.9078	.9361
-.208	1.0420	.8706	.9141	.9406
-.260	1.0171	.8868	.9337	.9547
-.312	.9922	.8912	.9477	.9645
-.364	.9803	.9000	.9582	.9717
-.416	.9685	.8955	.9616	.9741
-.468	.9328	.9051	.9850	.9900
-.520	.8971	.9046	1.0042	1.0027
-.572	.8604	.8993	1.0224	1.0146
-.624	.8236	.9023	1.0467	1.0301
-.676	.7879	.9000	1.0688	1.0439
-.728	.7523	.8878	1.0863	1.0547
-.780	.6788	.8686	1.1312	1.0812
-.832	.6053	.8575	1.1903	1.1142
-.884	.6172	.8655	1.1842	1.1109
-.936	.6291	.8883	1.1883	1.1132
-.988	.6420	.8895	1.1770	1.1070
-1.040	.6550	.8989	1.1715	1.1039

(n) x/D = 3.0; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 10 611.48 N/m^2 (221.63 lb/ft^2);
q_∞ = 19 015.78 N/m^2 (397.15 lb/ft^2);
$p_{t,\infty}$ = 45 103.20 N/m^2 (942.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8960	.9431	1.0260	1.0169
.988	.9424	.9484	1.0032	1.0021
.936	.9888	.9387	.9743	.9828
.884	1.0050	.9409	.9675	.9782
.832	1.0212	.9363	.9575	.9713
.780	1.0245	.9357	.9557	.9701
.728	1.0277	.9402	.9565	.9706
.676	1.0579	.9298	.9375	.9573
.624	1.0881	.9260	.9225	.9467
.572	1.1162	.9243	.9100	.9377
.520	1.1443	.9124	.8929	.9252
.468	1.1810	.8937	.8699	.9081
.416	1.2177	.8647	.8427	.8873
.364	1.2134	.8024	.8132	.8643
.312	1.2090	.7154	.7692	.8286
.260	1.2285	.6182	.7094	.7778
.208	1.2479	.5504	.6641	.7376
.156	1.2468	.4966	.6311	.7073
.104	1.2663	.4816	.6167	.6938
.052	1.2511	.4567	.6042	.6819
0.000	1.2846	.4405	.5856	.6641
-.052	1.2695	.4613	.6028	.6806
-.104	1.2544	.4580	.6042	.6820
-.156	1.2587	.4626	.6062	.6839
-.208	1.2630	.5168	.6397	.7152
-.260	1.2350	.6181	.7075	.7761
-.312	1.2069	.7340	.7798	.8374
-.364	1.1864	.8201	.8314	.8786
-.416	1.1659	.8832	.8704	.9085
-.468	1.1389	.9118	.8947	.9266
-.520	1.1119	.9167	.9080	.9362
-.572	1.0903	.9273	.9222	.9465
-.624	1.0687	.9245	.9301	.9521
-.676	1.0612	.9259	.9341	.9549
-.728	1.0536	.9222	.9356	.9560
-.780	1.0342	.9291	.9478	.9646
-.832	1.0147	.9292	.9569	.9709
-.884	.9834	.9380	.9766	.9844
-.936	.9521	.9369	.9919	.9947
-.988	.9068	.9447	1.0207	1.0135
-1.040	.8614	.9359	1.0423	1.0274

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(o) $x/D = 4.0$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 10 628.38 N/m^2 (221.98 lb/ft^2);
q_∞ = 19 046.06 N/m^2 (397.79 lb/ft^2);
$p_{t,\infty}$ = 45 175.02 N/m^2 (943.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1403	.9575	.9163	.9423
.988	1.1446	.9483	.9102	.9379
.936	1.1489	.9492	.9089	.9369
.884	1.1478	.9427	.9062	.9350
.832	1.1468	.9429	.9068	.9354
.780	1.1274	.9464	.9153	.9422
.728	1.1080	.9466	.9243	.9480
.676	1.1252	.9334	.9108	.9383
.624	1.1425	.9236	.8991	.9298
.572	1.1435	.9183	.8961	.9276
.520	1.1446	.9030	.8882	.9218
.468	1.1338	.8882	.8851	.9194
.416	1.1231	.8632	.8767	.9132
.364	1.0918	.8387	.8765	.9130
.312	1.0605	.8109	.8744	.9115
.260	1.0746	.7762	.8499	.8929
.208	1.0886	.7446	.8271	.8752
.156	1.0875	.7108	.8034	.8605
.104	1.1015	.6891	.7910	.8464
.052	1.0886	.6384	.7658	.8258
0.000	1.1144	.6260	.7495	.8122
-.052	1.1015	.6476	.7668	.8266
-.104	1.0886	.6794	.7900	.8457
-.156	1.1047	.6899	.7902	.8458
-.208	1.1209	.7259	.8047	.8575
-.260	1.1166	.7574	.8236	.8725
-.312	1.1123	.8073	.8519	.8945
-.364	1.1166	.8402	.8674	.9063
-.416	1.1209	.8831	.8876	.9213
-.468	1.1284	.9002	.8931	.9254
-.520	1.1360	.9105	.8953	.9270
-.572	1.1371	.9237	.9013	.9314
-.624	1.1381	.9235	.9008	.9310
-.676	1.1381	.9235	.9008	.9310
-.728	1.1381	.9319	.9049	.9340
-.780	1.1381	.9319	.9049	.9340
-.832	1.1381	.9386	.9081	.9363
-.884	1.1381	.9386	.9081	.9363
-.936	1.1381	.9470	.9121	.9393
-.988	1.1392	.9468	.9116	.9389
-1.040	1.1403	.9516	.9135	.9402

(p) $x/D = 5.0$; $y/D = 3.0$; $\alpha = 0^o$;

p_∞ = 10 594.59 N/m^2 (221.27 lb/ft^2)
q_∞ = 18 985.50 N/m^2 (396.52 lb/ft^2)
$p_{t,\infty}$ = 45 031.38 N/m^2 (940.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8498	.9759	1.0716	1.0457
.988	.8574	.9696	1.0634	1.0406
.936	.8650	.9734	1.0608	1.0390
.884	.8617	.9639	1.0576	1.0370
.832	.8585	.9678	1.0617	1.0396
.780	.8639	.9635	1.0561	1.0361
.728	.8693	.9626	1.0523	1.0337
.676	.8553	.9650	1.0622	1.0399
.624	.8412	.9674	1.0724	1.0461
.572	.8455	.9650	1.0683	1.0436
.520	.8498	.9676	1.0670	1.0428
.468	.8466	.9648	1.0675	1.0432
.416	.8434	.9670	1.0708	1.0452
.364	.7947	.9735	1.1068	1.0669
.312	.7460	.9815	1.1470	1.0902
.260	.7936	.9737	1.1076	1.0674
.208	.8412	.9657	1.0715	1.0456
.156	.7936	.9737	1.1076	1.0674
.104	.8412	.9657	1.0715	1.0456
.052	.8401	.9659	1.0722	1.0461
0.000	.8412	.9807	1.0797	1.0506
-.052	.8401	.9643	1.0714	1.0455
-.104	.8390	.9678	1.0740	1.0471
-.156	.8390	.9645	1.0722	1.0460
-.208	.8390	.9645	1.0722	1.0460
-.260	.8336	.9637	1.0752	1.0479
-.312	.8282	.9663	1.0801	1.0509
-.364	.8325	.9656	1.0769	1.0489
-.416	.8369	.9648	1.0737	1.0470
-.468	.8380	.9647	1.0729	1.0465
-.520	.8390	.9645	1.0722	1.0460
-.572	.8423	.9639	1.0698	1.0445
-.624	.8455	.9634	1.0674	1.0431
-.676	.8498	.9627	1.0643	1.0412
-.728	.8542	.9686	1.0649	1.0415
-.780	.8520	.9623	1.0628	1.0402
-.832	.8498	.9676	1.0671	1.0429
-.884	.8520	.9656	1.0646	1.0413
-.936	.8542	.9769	1.0694	1.0443
-.988	.8553	.9651	1.0623	1.0399
-1.040	.8563	.9765	1.0679	1.0434

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(q) x/D = 5.0; y/D = 2.0; $\alpha = 0^\circ$;

p_∞ = 10 595.71 N/m^2 (221.30 lb/ft^2)
q_∞ = 18 987.52 N/m^2 (396.56 lb/ft^2)
$p_{t,\infty}$ = 45 036.17 N/m^2 (940.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0845	1.0035	.9619	.9743
.988	1.0964	.9997	.9549	.9695
.936	1.1083	1.0026	.9511	.9669
.884	1.1040	1.0000	.9518	.9673
.832	1.0996	.9974	.9524	.9677
.780	1.0910	1.0090	.9617	.9742
.728	1.0823	1.0106	.9663	.9773
.676	1.0888	.9993	.9580	.9717
.624	1.0953	1.0032	.9571	.9710
.572	1.1007	1.0040	.9550	.9696
.520	1.1061	.9963	.9490	.9654
.468	1.1159	1.0013	.9473	.9642
.416	1.1256	.9928	.9392	.9585
.364	1.0682	1.0080	.9714	.9808
.312	1.0109	1.0130	1.0010	1.0007
.260	1.0542	1.0088	.9782	.9855
.208	1.0975	1.0045	.9567	.9707
.156	1.0704	1.0110	.9718	.9811
.104	1.1137	1.0033	.9492	.9655
.052	1.1159	1.0013	.9473	.9642
0.000	1.1299	.9920	.9370	.9570
-.052	1.1321	.9951	.9375	.9573
-.104	1.1343	.9930	.9357	.9560
-.156	1.1299	.9954	.9386	.9581
-.208	1.1256	.9946	.9400	.9591
-.260	1.1224	1.0001	.9440	.9619
-.312	1.1191	1.0024	.9464	.9636
-.364	1.1234	1.0033	.9450	.9626
-.416	1.1278	.9975	.9405	.9594
-.468	1.1245	1.0081	.9468	.9639
-.520	1.1213	1.0020	.9453	.9628
-.572	1.1213	1.0037	.9461	.9634
-.624	1.1213	.9937	.9414	.9601
-.676	1.1148	.9965	.9455	.9629
-.728	1.1083	.9960	.9480	.9647
-.780	1.1105	.9973	.9477	.9645
-.832	1.1126	.9935	.9450	.9626
-.884	1.1094	.9975	.9482	.9648
-.936	1.1061	.9997	.9507	.9666
-.988	1.0996	.9992	.9532	.9683
-1.040	1.0931	.9920	.9526	.9679

(r) x/D = 5.0; y/D = 1.5; $\alpha = 0^\circ$;

p_∞ = 10 591.21 N/m^2 (221.20 lb/ft^2)
q_∞ = 18 979.44 N/m^2 (396.39 lb/ft^2)
$p_{t,\infty}$ = 45 017.02 N/m^2 (940.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1119	.9966	.9467	.9638
.988	1.1205	.9917	.9408	.9596
.936	1.1292	.9935	.9380	.9577
.884	1.1259	.9890	.9372	.9571
.832	1.1227	.9879	.9381	.9577
.780	1.1097	.9986	.9486	.9651
.728	1.0967	1.0009	.9553	.9698
.676	1.1032	.9897	.9472	.9641
.624	1.1097	.9919	.9454	.9629
.572	1.1140	.9928	.9440	.9619
.520	1.1183	.9870	.9395	.9587
.468	1.1270	.9888	.9367	.9568
.416	1.1357	.9822	.9300	.9520
.364	1.0772	.9943	.9607	.9735
.312	1.0188	1.0012	.9913	.9942
.260	1.0599	.9957	.9692	.9793
.208	1.1010	.9901	.9483	.9649
.156	1.0762	.9962	.9621	.9745
.104	1.1173	.9872	.9400	.9591
.052	1.1194	.9835	.9373	.9572
0.000	1.1335	.9776	.9287	.9511
-.052	1.1357	.9803	.9291	.9514
-.104	1.1378	.9799	.9280	.9506
-.156	1.1346	.9822	.9304	.9523
-.208	1.1313	.9811	.9312	.9529
-.260	1.1292	.9848	.9339	.9548
-.312	1.1270	.9869	.9358	.9561
-.364	1.1281	.9867	.9352	.9557
-.416	1.1292	.9865	.9347	.9554
-.468	1.1281	.9934	.9384	.9580
-.520	1.1270	.9869	.9358	.9561
-.572	1.1281	.9884	.9360	.9563
-.624	1.1292	.9815	.9323	.9537
-.676	1.1248	.9856	.9361	.9563
-.728	1.1205	.9847	.9375	.9573
-.780	1.1238	.9858	.9366	.9567
-.832	1.1270	.9869	.9358	.9561
-.884	1.1248	.9873	.9369	.9569
-.936	1.1227	.9894	.9387	.9582
-.988	1.1173	.9903	.9415	.9601
-1.040	1.1119	.9896	.9434	.9615

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^o$;
p_∞ = 10 590.08 N/m^2 (221.18 lb/ft^2);
q_∞ = 18 977.42 N/m^2 (396.35 lb/ft^2);
$p_{t,\infty}$ = 45 012.23 N/m^2 (940.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1009	.9802	.9436	.9616
.988	1.1074	.9774	.9395	.9587
.936	1.1139	.9762	.9362	.9564
.884	1.1106	.9717	.9354	.9558
.832	1.1074	.9690	.9354	.9559
.780	1.0923	.9767	.9456	.9630
.728	1.0771	.9760	.9519	.9674
.676	1.0836	.9648	.9436	.9616
.624	1.0901	.9637	.9402	.9592
.572	1.0912	.9635	.9397	.9589
.520	1.0923	.9565	.9358	.9561
.468	1.0987	.9554	.9325	.9538
.416	1.1052	.9458	.9251	.9485
.364	1.0436	.9552	.9567	.9707
.312	.9819	.9543	.9858	.9906
.260	1.0220	.9439	.9611	.9737
.208	1.0620	.9368	.9392	.9585
.156	1.0393	.9341	.9481	.9647
.104	1.0793	.9236	.9251	.9485
.052	1.0793	.9168	.9217	.9461
0.000	1.0966	.9204	.9162	.9422
-.052	1.0966	.9180	.9149	.9413
-.104	1.0966	.9247	.9183	.9437
-.156	1.0987	.9293	.9197	.9447
-.208	1.1009	.9323	.9202	.9451
-.260	1.0987	.9394	.9247	.9482
-.312	1.0966	.9482	.9299	.9519
-.364	1.0987	.9545	.9321	.9535
-.416	1.1009	.9558	.9318	.9533
-.468	1.1031	.9655	.9356	.9560
-.520	1.1052	.9617	.9328	.9540
-.572	1.1074	.9647	.9333	.9544
-.624	1.1096	.9576	.9290	.9513
-.676	1.1052	.9634	.9336	.9546
-.728	1.1009	.9642	.9358	.9562
-.780	1.1041	.9653	.9350	.9556
-.832	1.1074	.9664	.9342	.9550
-.884	1.1074	.9697	.9358	.9561
-.936	1.1074	.9747	.9382	.9578
-.988	1.1031	.9738	.9396	.9588
-1.040	1.0987	.9746	.9418	.9604

(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^o$;
p_∞ = 10 620.50 N/m^2 (221.81 lb/ft^2);
q_∞ = 19 031.93 N/m^2 (397.49 lb/ft^2);
$p_{t,\infty}$ = 45 141.51 N/m^2 (942.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1066	.9782	.9402	.9592
.988	1.1099	.9726	.9361	.9564
.936	1.1131	.9704	.9337	.9546
.884	1.1099	.9676	.9337	.9547
.832	1.1066	.9615	.9321	.9535
.780	1.0883	.9715	.9448	.9625
.728	1.0700	.9681	.9512	.9669
.676	1.0775	.9533	.9406	.9595
.624	1.0851	.9537	.9375	.9573
.572	1.0851	.9486	.9350	.9556
.520	1.0851	.9336	.9276	.9503
.468	1.0894	.9244	.9212	.9458
.416	1.0937	.9069	.9106	.9381
.364	1.0333	.9061	.9364	.9566
.312	.9729	.8952	.9592	.9725
.260	1.0063	.8742	.9320	.9535
.208	1.0398	.8614	.9102	.9379
.156	1.0225	.8528	.9133	.9401
.104	1.0559	.8366	.8901	.9232
.052	1.0538	.8303	.8877	.9213
0.000	1.0721	.8286	.8791	.9150
-.052	1.0700	.8357	.8838	.9185
-.104	1.0678	.8361	.8849	.9193
-.156	1.0764	.8547	.8911	.9239
-.208	1.0851	.8733	.8971	.9283
-.260	1.0818	.8990	.9116	.9389
-.312	1.0786	.8963	.9116	.9388
-.364	1.0840	.9254	.9240	.9477
-.416	1.0894	.9328	.9254	.9487
-.468	1.0937	.9471	.9306	.9524
-.520	1.0980	.9480	.9292	.9514
-.572	1.1023	.9556	.9311	.9528
-.624	1.1066	.9481	.9256	.9489
-.676	1.1023	.9556	.9311	.9528
-.728	1.0980	.9564	.9333	.9543
-.780	1.1002	.9610	.9346	.9553
-.832	1.1023	.9606	.9335	.9545
-.884	1.1034	.9671	.9362	.9564
-.936	1.1045	.9686	.9365	.9566
-.988	1.1012	.9691	.9381	.9578
-1.040	1.0980	.9697	.9398	.9589

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(u) x/D = 5.0; y/D = 0.63; $\alpha = 0^o$;

p_∞ = 10 618.24 N/m^2 (221.77 lb/ft^2);
q_∞ = 19 027.89 N/m^2 (397.41 lb/ft^2);
$p_{t,\infty}$ = 45 131.93 N/m^2 (942.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0810	.9652	.9449	.9625
.988	1.0864	.9625	.9413	.9600
.936	1.0918	.9616	.9385	.9580
.884	1.0874	.9573	.9383	.9579
.832	1.0831	.9514	.9372	.9571
.780	1.0680	.9574	.9468	.9639
.728	1.0529	.9534	.9516	.9672
.676	1.0583	.9357	.9403	.9593
.624	1.0637	.9297	.9349	.9555
.572	1.0626	.9181	.9295	.9517
.520	1.0616	.8965	.9190	.9442
.468	1.0626	.8576	.8984	.9292
.416	1.0637	.8270	.8818	.9170
.364	1.0119	.8012	.8898	.9229
.312	.9601	.7770	.8996	.9301
.260	.9904	.7308	.8590	.8999
.208	1.0206	.7115	.8349	.8814
.156	1.0044	.6890	.8283	.8762
.104	1.0346	.6608	.7992	.8531
.052	1.0260	.6626	.8036	.8566
0.000	1.0486	.6494	.7869	.8432
-.052	1.0400	.6576	.7952	.8499
-.104	1.0314	.6934	.8200	.8696
-.156	1.0411	.6949	.8170	.8673
-.208	1.0508	.7355	.8366	.8827
-.260	1.0475	.7733	.8592	.9000
-.312	1.0443	.8143	.8831	.9179
-.364	1.0518	.8381	.8927	.9250
-.416	1.0594	.8770	.9098	.9376
-.468	1.0670	.9007	.9188	.9441
-.520	1.0745	.9144	.9225	.9467
-.572	1.0799	.9352	.9306	.9524
-.624	1.0853	.9342	.9278	.9505
-.676	1.0842	.9444	.9333	.9544
-.728	1.0831	.9446	.9339	.9548
-.780	1.0853	.9526	.9369	.9569
-.832	1.0874	.9522	.9358	.9561
-.884	1.0896	.9585	.9379	.9576
-.936	1.0918	.9615	.9384	.9580
-.988	1.0896	.9618	.9395	.9588
-1.040	1.0874	.9622	.9407	.9596

(v) x/D = 5.0; y/D = 0.42; $\alpha = 0^o$;

p_∞ = 10 615.99 N/m^2 (221.72 lb/ft^2);
q_∞ = 19 023.85 N/m^2 (397.32 lb/ft^2);
$p_{t,\infty}$ = 45 122.36 N/m^2 (942.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0747	.9585	.9444	.9622
.988	1.0790	.9561	.9413	.9600
.936	1.0834	.9537	.9382	.9578
.884	1.0780	.9479	.9377	.9575
.832	1.0726	.9455	.9389	.9583
.780	1.0564	.9501	.9484	.9649
.728	1.0402	.9463	.9538	.9687
.676	1.0488	.9230	.9381	.9577
.624	1.0575	.9130	.9292	.9515
.572	1.0564	.8948	.9203	.9451
.520	1.0553	.8664	.9061	.9349
.468	1.0510	.8285	.8878	.9215
.416	1.0467	.7769	.8615	.9018
.364	1.0068	.7455	.8605	.9010
.312	.9668	.7074	.8554	.8971
.260	.9852	.6733	.8267	.8749
.208	1.0035	.6354	.7957	.8503
.156	.9960	.6180	.7877	.8438
.104	1.0143	.6039	.7716	.8306
.052	1.0046	.5990	.7722	.8311
0.000	1.0251	.6017	.7661	.8261
-.052	1.0154	.6044	.7715	.8306
-.104	1.0057	.6236	.7875	.8436
-.156	1.0186	.6399	.7926	.8477
-.208	1.0316	.6680	.8047	.8575
-.260	1.0294	.7025	.8261	.8745
-.312	1.0273	.7419	.8498	.8929
-.364	1.0348	.7928	.8753	.9121
-.416	1.0424	.8468	.9013	.9314
-.468	1.0521	.8685	.9086	.9367
-.520	1.0618	.8969	.9191	.9442
-.572	1.0683	.9208	.9284	.9509
-.624	1.0747	.9213	.9259	.9491
-.676	1.0758	.9362	.9328	.9540
-.728	1.0769	.9343	.9314	.9531
-.780	1.0780	.9425	.9350	.9556
-.832	1.0790	.9423	.9345	.9552
-.884	1.0812	.9502	.9375	.9573
-.936	1.0834	.9532	.9380	.9577
-.988	1.0801	.9538	.9397	.9589
-1.040	1.0769	.9543	.9414	.9601

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(w) $x/D = 5.0$; $y/D = 0.21$; $\alpha = 0^\circ$;

$p_\infty = 10\ 617.12\ N/m^2$ $(221.74\ lb/ft^2)$;
$q_\infty = 19\ 025.87\ N/m^2$ $(397.36\ lb/ft^2)$;
$p_{t,\infty} = 45\ 127.14\ N/m^2$ $(942.50\ lb/ft^2)$

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0595	.9524	.9481	.9648
.988	1.0660	.9495	.9438	.9618
.936	1.0725	.9467	.9395	.9588
.884	1.0692	.9439	.9396	.9588
.832	1.0660	.9395	.9388	.9582
.780	1.0541	.9449	.9468	.9639
.728	1.0423	.9437	.9516	.9672
.676	1.0541	.9248	.9367	.9567
.624	1.0660	.9126	.9253	.9487
.572	1.0649	.8977	.9181	.9436
.520	1.0638	.8726	.9057	.9346
.468	1.0574	.8604	.9020	.9319
.416	1.0509	.8143	.8803	.9159
.364	1.0120	.7810	.8785	.9145
.312	.9732	.7511	.8785	.9146
.260	.9829	.7222	.8572	.8985
.208	.9926	.6897	.8336	.8803
.156	.9937	.6725	.8226	.8717
.104	1.0034	.6654	.8143	.8652
.052	.9937	.6502	.8089	.8609
0.000	1.0142	.6478	.7992	.8531
-.052	1.0045	.6546	.8072	.8595
-.104	.9948	.6650	.8176	.8678
-.156	1.0131	.6784	.8183	.8683
-.208	1.0315	.7020	.8250	.8736
-.260	1.0315	.7308	.8418	.8866
-.312	1.0315	.7646	.8610	.9014
-.364	1.0379	.8123	.8846	.9191
-.416	1.0444	.8463	.9002	.9306
-.468	1.0509	.8837	.9170	.9428
-.520	1.0574	.9026	.9239	.9477
-.572	1.0617	.9169	.9293	.9515
-.624	1.0660	.9144	.9262	.9493
-.676	1.0660	.9295	.9338	.9547
-.728	1.0660	.9278	.9329	.9541
-.780	1.0660	.9378	.9380	.9577
-.832	1.0660	.9361	.9371	.9571
-.884	1.0671	.9393	.9382	.9578
-.936	1.0681	.9408	.9385	.9580
-.988	1.0681	.9508	.9435	.9615
-1.040	1.0681	.9508	.9435	.9615

(x) $x/D = 5.0$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 10\ 630.63\ N/m^2$ $(222.03\ lb/ft^2)$;
$q_\infty = 19\ 050.10\ N/m^2$ $(397.87\ lb/ft^2)$;
$p_{t,\infty} = 45\ 184.60\ N/m^2$ $(943.70\ lb/ft^2)$

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0452	.9463	.9515	.9671
.988	1.0517	.9452	.9480	.9647
.936	1.0582	.9374	.9412	.9599
.884	1.0517	.9385	.9447	.9624
.832	1.0452	.9330	.9448	.9624
.780	1.0269	.9363	.9548	.9694
.728	1.0086	.9395	.9651	.9765
.676	1.0226	.9220	.9495	.9658
.624	1.0366	.9145	.9393	.9586
.572	1.0377	.9110	.9370	.9569
.520	1.0388	.8957	.9286	.9510
.468	1.0388	.8790	.9199	.9448
.416	1.0388	.8606	.9102	.9379
.364	.9946	.8519	.9255	.9488
.312	.9504	.8365	.9381	.9578
.260	.9720	.8158	.9162	.9422
.208	.9935	.7851	.8889	.9223
.156	.9817	.7705	.8859	.9201
.104	1.0032	.7327	.8546	.8965
.052	.9978	.6965	.8355	.8818
0.000	1.0129	.6902	.8255	.8740
-.052	1.0075	.7031	.8354	.8817
-.104	1.0021	.7363	.8572	.8985
-.156	1.0226	.7544	.8589	.8998
-.208	1.0431	.7690	.8586	.8996
-.260	1.0366	.7989	.8779	.9141
-.312	1.0301	.8270	.8960	.9275
-.364	1.0366	.8493	.9051	.9342
-.416	1.0431	.8699	.9132	.9400
-.468	1.0463	.8960	.9254	.9488
-.520	1.0495	.9038	.9280	.9506
-.572	1.0549	.9162	.9319	.9534
-.624	1.0603	.9153	.9291	.9514
-.676	1.0625	.9232	.9322	.9536
-.728	1.0646	.9212	.9302	.9522
-.780	1.0646	.9295	.9344	.9551
-.832	1.0646	.9295	.9344	.9551
-.884	1.0646	.9362	.9377	.9575
-.936	1.0646	.9362	.9377	.9575
-.988	1.0765	.9441	.9365	.9566
-1.040	1.0883	.9537	.9361	.9563

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^\circ$;

p_∞ = 10 631.76 N/m^2 (222.05 lb/ft^2);
q_∞ = 19 052.11 N/m^2 (397.91 lb/ft^2);
$p_{t,\infty}$ = 45 189.39 N/m^2 (943.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0063	.9548	.9740	.9826
.988	1.0139	.9584	.9723	.9814
.936	1.0214	.9488	.9638	.9756
.884	1.0160	.9547	.9694	.9794
.832	1.0106	.9490	.9690	.9792
.780	.9988	.9411	.9707	.9803
.728	.9869	.9399	.9759	.9838
.676	.9966	.9315	.9668	.9776
.624	1.0063	.9248	.9586	.9721
.572	1.0074	.9246	.9580	.9716
.520	1.0085	.9127	.9513	.9670
.468	1.0171	.9112	.9465	.9636
.416	1.0257	.8996	.9365	.9566
.364	.9697	.9063	.9667	.9776
.312	.9137	.9028	.9940	.9960
.260	.9503	.8930	.9694	.9794
.208	.9869	.8715	.9397	.9589
.156	.9632	.8541	.9416	.9602
.104	.9999	.8190	.9051	.9341
.052	1.0009	.7769	.8810	.9164
0.000	1.0128	.7426	.8563	.8978
-.052	1.0139	.7711	.8721	.9097
-.104	1.0150	.8179	.8977	.9287
-.156	1.0182	.8475	.9123	.9394
-.208	1.0214	.8653	.9204	.9452
-.260	1.0182	.8860	.9328	.9540
-.312	1.0150	.8899	.9364	.9565
-.364	1.0160	.9030	.9428	.9610
-.416	1.0171	.9029	.9422	.9606
-.468	1.0160	.9164	.9497	.9659
-.520	1.0150	.9166	.9503	.9663
-.572	1.0203	.9240	.9516	.9672
-.624	1.0257	.9197	.9469	.9639
-.676	1.0236	.9284	.9524	.9677
-.728	1.0214	.9288	.9536	.9686
-.780	1.0236	.9401	.9583	.9719
-.832	1.0257	.9380	.9563	.9704
-.884	1.0300	.9472	.9590	.9723
-.936	1.0343	.9531	.9599	.9730
-.988	1.0721	.9665	.9495	.9657
-1.040	1.1098	.9714	.9356	.9560

(z) $x/D = 6.0$; $y/D = 0.0$; $\alpha = 0^\circ$;

p_∞ = 10 600.22 N/m^2 (221.39 lb/ft^2);
q_∞ = 18 995.59 N/m^2 (396.73 lb/ft^2);
$p_{t,\infty}$ = 45 055.32 N/m^2 (941.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0912	.9514	.9337	.9547
.988	1.0977	.9536	.9320	.9535
.936	1.1042	.9457	.9254	.9488
.884	1.0977	.9468	.9287	.9511
.832	1.0912	.9480	.9321	.9535
.780	1.0804	.9432	.9344	.9551
.728	1.0696	.9468	.9409	.9597
.676	1.0999	.9363	.9227	.9468
.624	1.1301	.9156	.9001	.9305
.572	1.1323	.9102	.8966	.9279
.520	1.1344	.9030	.8922	.9247
.468	1.1128	.8850	.8918	.9244
.416	1.0912	.8772	.8966	.9279
.364	1.0739	.8567	.8932	.9254
.312	1.0566	.8159	.8787	.9147
.260	1.0037	.8155	.9014	.9315
.208	.9508	.7949	.9143	.9408
.156	1.0469	.7617	.8530	.8953
.104	.9940	.7462	.8665	.9055
.052	1.0080	.7249	.8480	.8915
0.000	1.0372	.7158	.8308	.8781
-.052	1.0512	.7274	.8318	.8789
-.104	1.0653	.7535	.8410	.8861
-.156	1.0890	.7659	.8386	.8842
-.208	1.1128	.7850	.8399	.8852
-.260	1.1074	.8097	.8551	.8969
-.312	1.1020	.8344	.8701	.9083
-.364	1.1031	.8628	.8844	.9189
-.416	1.1042	.8861	.8958	.9274
-.468	1.1053	.9027	.9037	.9331
-.520	1.1063	.9142	.9090	.9370
-.572	1.1031	.9232	.9148	.9412
-.624	1.0999	.9255	.9173	.9430
-.676	1.1074	.9291	.9160	.9420
-.728	1.1150	.9277	.9122	.9393
-.780	1.1074	.9341	.9184	.9438
-.832	1.0999	.9405	.9247	.9483
-.884	1.0955	.9446	.9286	.9510
-.936	1.0912	.9488	.9324	.9538
-.988	1.0869	.9529	.9363	.9565
-1.040	1.0826	.9503	.9369	.9569

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(aa) x/D = 7.0; y/D = 0.0; $\alpha = 0^o$;
p_∞ = 10 602.47 N/m² (221.44 lb/ft²);
q_∞ = 18 999.63 N/m² (396.82 lb/ft²);
$p_{t,\infty}$ = 45 064.90 N/m² (941.20 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0706	.9594	.9466	.9637
.988	1.1149	.9615	.9287	.9511
.936	1.1592	.9568	.9085	.9366
.884	1.1765	.9536	.9003	.9306
.832	1.1938	.9538	.8938	.9259
.780	1.2338	.9464	.8758	.9125
.728	1.2739	.9388	.8585	.8995
.676	1.2868	.9330	.8515	.8941
.624	1.2998	.9203	.8414	.8864
.572	1.3193	.9080	.8296	.8772
.520	1.3387	.8888	.8148	.8656
.468	1.3214	.8683	.8106	.8622
.416	1.3041	.8649	.8144	.8652
.364	1.2544	.8440	.8203	.8699
.312	1.2046	.8401	.8351	.8815
.260	1.2252	.8122	.8142	.8651
.208	1.2457	.7978	.8003	.8539
.156	1.2220	.7717	.7947	.8494
.104	1.2425	.7434	.7735	.8322
.052	1.2252	.7245	.7690	.8284
0.000	1.2393	.7163	.7603	.8212
-.052	1.2220	.7282	.7720	.8309
-.104	1.2046	.7489	.7885	.8444
-.156	1.2317	.7606	.7858	.8423
-.208	1.2587	.7809	.7876	.8437
-.260	1.2501	.8083	.8041	.8570
-.312	1.2414	.8373	.8213	.8707
-.364	1.2349	.8607	.8348	.8813
-.416	1.2284	.8840	.8483	.8917
-.468	1.1971	.9018	.8679	.9066
-.520	1.1657	.9144	.8856	.9199
-.572	1.1279	.9264	.9063	.9350
-.624	1.0900	.9266	.9220	.9463
-.676	1.0511	.9336	.9424	.9608
-.728	1.0122	.9305	.9588	.9722
-.780	.9949	.9385	.9713	.9807
-.832	.9776	.9316	.9762	.9841
-.884	.9732	.9407	.9831	.9887
-.936	.9689	.9381	.9840	.9893
-.988	.9732	.9523	.9892	.9928
-1.040	.9776	.9466	.9840	.9893

(bb) x/D = 8.0; y/D = 0.0; $\alpha = 0^o$;
p_∞ = 10 608.10 N/m² (221.55 lb/ft²);
q_∞ = 19 009.72 N/m² (397.03 lb/ft²);
$p_{t,\infty}$ = 45 088.84 N/m² (941.70 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1984	.9624	.8962	.9276
.988	1.1962	.9561	.8940	.9261
.936	1.1940	.9565	.8950	.9268
.884	1.1940	.9464	.8903	.9233
.832	1.1940	.9447	.8895	.9227
.780	1.1703	.9441	.8982	.9291
.728	1.1465	.9501	.9103	.9379
.676	1.1724	.9336	.8923	.9248
.624	1.1984	.9152	.8739	.9111
.572	1.1951	.9108	.8730	.9104
.520	1.1919	.9046	.8712	.9091
.468	1.1843	.8841	.8640	.9037
.416	1.1768	.8821	.8658	.9050
.364	1.1379	.8641	.8714	.9093
.312	1.0990	.8629	.8861	.9202
.260	1.1228	.8365	.8632	.9030
.208	1.1465	.8201	.8458	.8897
.156	1.1530	.7934	.8295	.8771
.104	1.1768	.7802	.8142	.8651
.052	1.1757	.7599	.8039	.8569
0.000	1.2070	.7433	.7847	.8414
-.052	1.2059	.7447	.7858	.8423
-.104	1.2048	.7604	.7944	.8492
-.156	1.2286	.7658	.7895	.8453
-.208	1.2523	.7936	.7961	.8505
-.260	1.2372	.8086	.8084	.8605
-.312	1.2221	.8354	.8268	.8750
-.364	1.2232	.8556	.8363	.8824
-.416	1.2243	.8740	.8449	.8891
-.468	1.2297	.8916	.8515	.8942
-.520	1.2351	.8956	.8516	.8942
-.572	1.2275	.9055	.8589	.8998
-.624	1.2199	.9221	.8694	.9077
-.676	1.2232	.9198	.8672	.9061
-.728	1.2264	.9294	.8705	.9086
-.780	1.2199	.9323	.8742	.9113
-.832	1.2135	.9436	.8818	.9170
-.884	1.2178	.9428	.8799	.9156
-.936	1.2221	.9487	.8811	.9165
-.988	1.2253	.9464	.8788	.9148
-1.040	1.2286	.9509	.8797	.9155

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(cc) $x/D = 8.39$; $y/D = 3.0$; $\alpha = 0^o$;

p_∞ = 10 621.62 N/m^2 (221.84 lb/ft^2);
q_∞ = 19 033.95 N/m^2 (397.53 lb/ft^2);
$p_{t,\infty}$ = 45 146.30 N/m^2 (942.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2354	1.0160	.9069	.9354
.988	1.2386	1.0120	.9039	.9333
.936	1.2418	1.0182	.9055	.9344
.884	1.2472	1.0105	.9001	.9305
.832	1.2526	1.0145	.9000	.9304
.780	1.2289	1.0189	.9105	.9381
.728	1.2052	1.0249	.9222	.9464
.676	1.2181	1.0191	.9147	.9411
.624	1.2310	1.0151	.9081	.9363
.572	1.2332	1.0164	.9078	.9361
.520	1.2354	1.0143	.9061	.9349
.468	1.2397	1.0135	.9042	.9335
.416	1.2440	1.0111	.9015	.9315
.364	1.1782	1.0230	.9318	.9533
.312	1.1125	1.0331	.9636	.9755
.260	1.1567	1.0252	.9415	.9601
.208	1.2009	1.0172	.9204	.9452
.156	1.1761	1.0234	.9328	.9540
.104	1.2203	1.0154	.9122	.9393
.052	1.2192	1.0122	.9112	.9386
0.000	1.2397	1.0085	.9019	.9319
-.052	1.2386	1.0059	.9012	.9313
-.104	1.2375	1.0078	.9024	.9322
-.156	1.2386	1.0076	.9020	.9319
-.208	1.2397	1.0074	.9015	.9315
-.260	1.2321	1.0138	.9071	.9356
-.312	1.2246	1.0152	.9105	.9381
-.364	1.2235	1.0171	.9118	.9390
-.416	1.2224	1.0173	.9122	.9393
-.468	1.2278	1.0213	.9120	.9392
-.520	1.2332	1.0136	.9066	.9352
-.572	1.2321	1.0155	.9079	.9361
-.624	1.2310	1.0140	.9076	.9360
-.676	1.2267	1.0098	.9073	.9357
-.728	1.2224	1.0106	.9092	.9371
-.780	1.2213	1.0108	.9097	.9375
-.832	1.2203	1.0160	.9125	.9395
-.884	1.2192	1.0128	.9115	.9388
-.936	1.2131	1.0147	.9127	.9397
-.988	1.2116	1.0125	.9142	.9407
-1.040	1.2052	1.0121	.9164	.9423

(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^o$;

p_∞ = 10 615.99 N/m^2 (221.72 lb/ft^2);
q_∞ = 19 023.85 N/m^2 (397.32 lb/ft^2);
$p_{t,\infty}$ = 45 122.36 N/m^2 (942.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1303	1.0034	.9422	.9606
.988	1.1357	1.0025	.9395	.9587
.936	1.1411	1.0015	.9368	.9569
.884	1.1379	1.0021	.9384	.9580
.832	1.1346	.9993	.9385	.9580
.780	1.1163	1.0093	.9509	.9667
.728	1.0980	1.0159	.9619	.9743
.676	1.1120	1.0017	.9491	.9655
.624	1.1260	.9992	.9420	.9605
.572	1.1292	1.0020	.9420	.9605
.520	1.1325	.9963	.9380	.9577
.468	1.1346	1.0010	.9393	.9586
.416	1.1368	.9972	.9366	.9567
.364	1.0785	1.0076	.9666	.9775
.312	1.0203	1.0128	.9963	.9976
.260	1.0688	1.0127	.9734	.9821
.208	1.1174	1.0007	.9464	.9635
.156	1.0861	1.0146	.9665	.9775
.104	1.1346	.9993	.9385	.9580
.052	1.1379	1.0038	.9392	.9585
0.000	1.1519	.9928	.9284	.9509
-.052	1.1551	.9953	.9283	.9508
-.104	1.1584	.9931	.9259	.9491
-.156	1.1594	.9995	.9285	.9510
-.208	1.1605	.9943	.9256	.9489
-.260	1.1562	1.0001	.9301	.9521
-.312	1.1519	.9992	.9314	.9530
-.364	1.1487	1.0065	.9361	.9563
-.416	1.1454	1.0004	.9346	.9553
-.468	1.1443	1.0106	.9398	.9589
-.520	1.1433	1.0058	.9380	.9577
-.572	1.1454	1.0071	.9377	.9575
-.624	1.1476	.9967	.9319	.9534
-.676	1.1411	1.0028	.9375	.9573
-.728	1.1346	.9957	.9368	.9568
-.780	1.1336	1.0042	.9412	.9599
-.832	1.1325	.9960	.9378	.9576
-.884	1.1357	1.0005	.9386	.9581
-.936	1.1389	.9982	.9362	.9564
-.988	1.1368	1.0036	.9396	.9588
-1.040	1.1346	.9990	.9383	.9579

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^o$;
p_∞ = 10 611.48 N/m^2 (221.63 lb/ft^2);
q_∞ = 19 015.78 N/m^2 (397.15 lb/ft^2);
$p_{t,\infty}$ = 45 103.20 N/m^2 (942.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1157	.9955	.9446	.9623
.988	1.1265	.9969	.9407	.9596
.936	1.1373	.9950	.9354	.9558
.884	1.1427	.9957	.9335	.9545
.832	1.1481	.9897	.9285	.9510
.780	1.1416	1.0009	.9364	.9565
.728	1.1351	1.0021	.9396	.9588
.676	1.1459	.9935	.9311	.9528
.624	1.1567	.9915	.9258	.9491
.572	1.1578	.9913	.9253	.9487
.520	1.1589	.9861	.9224	.9467
.468	1.1642	.9901	.9222	.9465
.416	1.1696	.9808	.9157	.9418
.364	1.1232	.9925	.9400	.9591
.312	1.0768	.9941	.9608	.9735
.260	1.1038	.9943	.9491	.9654
.208	1.1308	.9861	.9338	.9547
.156	1.1189	.9933	.9422	.9606
.104	1.1459	.9851	.9272	.9500
.052	1.1481	.9847	.9261	.9493
0.000	1.1610	.9756	.9167	.9425
-.052	1.1632	.9810	.9184	.9437
-.104	1.1653	.9789	.9165	.9424
-.156	1.1642	.9841	.9194	.9445
-.208	1.1632	.9827	.9191	.9443
-.260	1.1567	.9872	.9238	.9476
-.312	1.1502	.9900	.9277	.9504
-.364	1.1459	.9925	.9306	.9525
-.416	1.1416	.9882	.9304	.9523
-.468	1.1405	.9985	.9357	.9560
-.520	1.1394	.9920	.9330	.9542
-.572	1.1362	.9959	.9362	.9564
-.624	1.1330	.9864	.9331	.9542
-.676	1.1243	.9897	.9382	.9578
-.728	1.1157	.9879	.9410	.9598
-.780	1.1135	.9933	.9445	.9622
-.832	1.1114	.9853	.9416	.9602
-.884	1.1071	.9944	.9478	.9645
-.936	1.1027	.9902	.9476	.9644
-.988	1.1006	.9972	.9519	.9674
-1.040	1.0984	.9876	.9482	.9648

(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^o$;
p_∞ = 10 612.61 N/m^2 (221.65 lb/ft^2);
q_∞ = 19 017.80 N/m^2 (397.19 lb/ft^2);
$p_{t,\infty}$ = 45 107.99 N/m^2 (942.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1719	.9886	.9185	.9438
.988	1.1741	.9815	.9143	.9408
.936	1.1763	.9811	.9133	.9401
.884	1.1773	.9776	.9112	.9386
.832	1.1784	.9757	.9099	.9376
.780	1.1547	.9783	.9205	.9452
.728	1.1309	.9793	.9305	.9524
.676	1.1471	.9629	.9162	.9422
.624	1.1633	.9532	.9052	.9342
.572	1.1644	.9480	.9023	.9321
.520	1.1655	.9394	.8978	.9288
.468	1.1666	.9291	.8924	.9249
.416	1.1676	.9154	.8854	.9197
.364	1.1137	.9170	.9074	.9358
.312	1.0597	.9083	.9258	.9491
.260	1.1007	.8924	.9004	.9307
.208	1.1417	.8798	.8778	.9140
.156	1.1266	.8792	.8834	.9182
.104	1.1676	.8597	.8581	.8992
.052	1.1655	.8517	.8548	.8967
0.000	1.1935	.8497	.8437	.8882
-.052	1.1914	.8612	.8502	.8932
-.104	1.1892	.8701	.8554	.8971
-.156	1.2043	.8672	.8486	.8919
-.208	1.2194	.8829	.8509	.8937
-.260	1.2173	.8969	.8584	.8994
-.312	1.2151	.9091	.8650	.9044
-.364	1.2173	.9272	.8728	.9103
-.416	1.2194	.9218	.8694	.9077
-.468	1.2302	.9433	.8757	.9124
-.520	1.2410	.9497	.8748	.9118
-.572	1.2356	.9608	.8818	.9170
-.624	1.2302	.9652	.8858	.9199
-.676	1.2345	.9644	.8838	.9185
-.728	1.2389	.9686	.8842	.9188
-.780	1.2367	.9707	.8860	.9201
-.832	1.2345	.9795	.8907	.9236
-.884	1.2367	.9774	.8890	.9224
-.936	1.2389	.9821	.8904	.9233
-.988	1.2367	.9825	.8913	.9241
-1.040	1.2345	.9846	.8930	.9253

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^\circ$;

p_∞ = 10 612.61 N/m² (221.65 lb/ft²);
q_∞ = 19 017.80 N/m² (397.19 lb/ft²);
$p_{t,\infty}$ = 45 107.99 N/m² (942.10 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1633	.9824	.9190	.9442
.988	1.1655	.9770	.9156	.9417
.936	1.1676	.9783	.9153	.9415
.884	1.1709	.9692	.9098	.9376
.832	1.1741	.9686	.9083	.9365
.780	1.1525	.9658	.9154	.9416
.728	1.1309	.9664	.9244	.9480
.676	1.1460	.9502	.9105	.9381
.624	1.1612	.9322	.8960	.9275
.572	1.1622	.9134	.8865	.9205
.520	1.1633	.8997	.8794	.9152
.468	1.1655	.8824	.8701	.9083
.416	1.1676	.8667	.8616	.9018
.364	1.1223	.8566	.8736	.9109
.312	1.0770	.8414	.8839	.9185
.260	1.1137	.8192	.8577	.8989
.208	1.1504	.8020	.8350	.8814
.156	1.1385	.8009	.8387	.8843
.104	1.1752	.7766	.8129	.8640
.052	1.1698	.7777	.8153	.8660
0.000	1.2000	.7820	.8072	.8595
-.052	1.1946	.7700	.8028	.8560
-.104	1.1892	.7830	.8114	.8629
-.156	1.2130	.7936	.8089	.8608
-.208	1.2367	.8060	.8073	.8596
-.260	1.2216	.8277	.8232	.8721
-.312	1.2065	.8595	.8441	.8884
-.364	1.2097	.8708	.8484	.8918
-.416	1.2130	.8972	.8601	.9007
-.468	1.2194	.9078	.8628	.9028
-.520	1.2259	.9134	.8632	.9030
-.572	1.2248	.9372	.8747	.9117
-.624	1.2237	.9526	.8823	.9174
-.676	1.2259	.9471	.8790	.9149
-.728	1.2281	.9602	.8842	.9188
-.780	1.2237	.9660	.8885	.9220
-.832	1.2194	.9736	.8935	.9257
-.884	1.2194	.9736	.8935	.9257
-.936	1.2194	.9769	.8951	.9268
-.988	1.2205	.9767	.8946	.9264
-1.040	1.2216	.9765	.8941	.9261

(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^\circ$;

p_∞ = 10 610.36 N/m² (221.60 lb/ft²);
q_∞ = 19 013.76 N/m² (397.11 lb/ft²);
$p_{t,\infty}$ = 45 098.42 N/m² (941.90 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1571	.9754	.9181	.9436
.988	1.1592	.9682	.9139	.9405
.936	1.1614	.9678	.9129	.9398
.884	1.1592	.9598	.9099	.9376
.832	1.1571	.9585	.9102	.9378
.780	1.1377	.9587	.9180	.9435
.728	1.1182	.9487	.9211	.9457
.676	1.1377	.9334	.9058	.9347
.624	1.1571	.9045	.8841	.9187
.572	1.1625	.8899	.8750	.9119
.520	1.1679	.8652	.8607	.9012
.468	1.1722	.8474	.8502	.8932
.416	1.1765	.8227	.8362	.8824
.364	1.1355	.7965	.8376	.8834
.312	1.0945	.7874	.8482	.8916
.260	1.1312	.7632	.8214	.8708
.208	1.1679	.7319	.7916	.8470
.156	1.1485	.7255	.7948	.8495
.104	1.1851	.7076	.7727	.8315
.052	1.1733	.7135	.7798	.8374
0.000	1.2024	.7109	.7689	.8284
-.052	1.1905	.7133	.7740	.8326
-.104	1.1787	.7295	.7867	.8430
-.156	1.1959	.7259	.7791	.8368
-.208	1.2132	.7379	.7799	.8374
-.260	1.2013	.7523	.7913	.8467
-.312	1.1895	.7889	.8144	.8652
-.364	1.1938	.8152	.8264	.8747
-.416	1.1981	.8280	.8313	.8785
-.468	1.2089	.8615	.8442	.8885
-.520	1.2197	.8865	.8525	.8949
-.572	1.2208	.9099	.8634	.9032
-.624	1.2218	.9232	.8693	.9076
-.676	1.2229	.9315	.8727	.9102
-.728	1.2240	.9447	.8785	.9146
-.780	1.2154	.9497	.8840	.9186
-.832	1.2067	.9664	.8949	.9267
-.884	1.2078	.9662	.8944	.9263
-.936	1.2089	.9694	.8955	.9271
-.988	1.2067	.9698	.8965	.9278
-1.040	1.2046	.9719	.8982	.9291

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^o$;
$p_\infty = 10\ 611.48\ N/m^2$ ($221.63\ lb/ft^2$);
$q_\infty = 19\ 015.78\ N/m^2$ ($397.15\ lb/ft^2$);
$p_{t,\infty} = 45\ 103.20\ N/m^2$ ($942.00\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1561	.9691	.9155	.9417
.988	1.1582	.9619	.9113	.9387
.936	1.1604	.9632	.9111	.9385
.884	1.1572	.9554	.9086	.9367
.832	1.1539	.9526	.9086	.9367
.780	1.1356	.9509	.9151	.9414
.728	1.1172	.9425	.9185	.9438
.676	1.1377	.9286	.9035	.9330
.624	1.1582	.8945	.8788	.9148
.572	1.1658	.8863	.8719	.9096
.520	1.1734	.8594	.8558	.8975
.468	1.1777	.8382	.8437	.8881
.416	1.1820	.8152	.8305	.8779
.364	1.1453	.7934	.8323	.8793
.312	1.1085	.7852	.8416	.8865
.260	1.1410	.7515	.8116	.8630
.208	1.1734	.7416	.7950	.8497
.156	1.1550	.7350	.7977	.8519
.104	1.1874	.7146	.7758	.8340
.052	1.1755	.7136	.7791	.8368
0.000	1.2015	.7048	.7659	.8259
-.052	1.1896	.7099	.7725	.8314
-.104	1.1777	.7141	.7787	.8364
-.156	1.1928	.7179	.7758	.8340
-.208	1.2079	.7337	.7793	.8370
-.260	1.1982	.7545	.7935	.8485
-.312	1.1885	.7719	.8059	.8584
-.364	1.1939	.8032	.8202	.8698
-.416	1.1993	.8242	.8290	.8767
-.468	1.2112	.8576	.8414	.8864
-.520	1.2231	.8739	.8453	.8894
-.572	1.2242	.8974	.8562	.8977
-.624	1.2252	.9157	.8645	.9040
-.676	1.2263	.9223	.8672	.9061
-.728	1.2274	.9355	.8731	.9105
-.780	1.2177	.9441	.8805	.9161
-.832	1.2079	.9577	.8904	.9234
-.884	1.2079	.9543	.8888	.9222
-.936	1.2079	.9610	.8920	.9245
-.988	1.2047	.9616	.8934	.9256
-1.040	1.2015	.9622	.8949	.9267

(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^o$;
$p_\infty = 10\ 612.61\ N/m^2$ ($221.65\ lb/ft^2$);
$q_\infty = 19\ 017.80\ N/m^2$ ($397.19\ lb/ft^2$);
$p_{t,\infty} = 45\ 107.99\ N/m^2$ ($942.10\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1365	.9641	.9210	.9456
.988	1.1430	.9579	.9154	.9416
.936	1.1495	.9567	.9123	.9394
.884	1.1484	.9518	.9104	.9380
.832	1.1473	.9487	.9093	.9372
.780	1.1322	.9497	.9159	.9419
.728	1.1171	.9458	.9201	.9450
.676	1.1408	.9280	.9019	.9318
.624	1.1646	.9134	.8856	.9199
.572	1.1776	.8958	.8722	.9098
.520	1.1905	.8849	.8621	.9022
.468	1.1970	.8599	.8476	.8911
.416	1.2035	.8450	.8379	.8837
.364	1.1614	.8327	.8468	.8905
.312	1.1192	.8306	.8615	.9017
.260	1.1495	.7976	.8330	.8798
.208	1.1797	.7729	.8094	.8612
.156	1.1592	.7649	.8123	.8636
.104	1.1895	.7486	.7933	.8483
.052	1.1787	.7422	.7935	.8485
0.000	1.1992	.7328	.7817	.8389
-.052	1.1884	.7359	.7869	.8431
-.104	1.1776	.7449	.7954	.8500
-.156	1.1992	.7491	.7904	.8460
-.208	1.2208	.7567	.7873	.8435
-.260	1.2111	.7826	.8039	.8569
-.312	1.2013	.8016	.8169	.8672
-.364	1.2046	.8180	.8241	.8729
-.416	1.2078	.8496	.8387	.8843
-.468	1.2197	.8609	.8401	.8854
-.520	1.2316	.8840	.8472	.8908
-.572	1.2262	.8969	.8552	.8970
-.624	1.2208	.9198	.8680	.9067
-.676	1.2240	.9226	.8682	.9068
-.728	1.2273	.9321	.8715	.9093
-.780	1.2186	.9371	.8769	.9134
-.832	1.2100	.9488	.8855	.9198
-.884	1.2057	.9496	.8875	.9212
-.936	1.2013	.9537	.8910	.9238
-.988	1.1949	.9549	.8940	.9260
-1.040	1.1884	.9578	.8978	.9288

TABLE 1.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(kk) x/D = 8.39; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 10 608.10 N/m^2 (221.55 lb/ft^2);
q_∞ = 19 009.72 N/m^2 (397.03 lb/ft^2);
$p_{t,\infty}$ = 45 088.84 N/m^2 (941.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1370	.9602	.9190	.9442
.988	1.1402	.9529	.9142	.9407
.936	1.1435	.9523	.9126	.9396
.884	1.1402	.9445	.9101	.9378
.832	1.1370	.9468	.9125	.9395
.780	1.1186	.9468	.9200	.9449
.728	1.1003	.9451	.9268	.9498
.676	1.1294	.9314	.9081	.9363
.624	1.1586	.9193	.8907	.9236
.572	1.1770	.9074	.8780	.9142
.520	1.1954	.8955	.8655	.9048
.468	1.2018	.8858	.8585	.8995
.416	1.2083	.8710	.8490	.8923
.364	1.1640	.8676	.8633	.9032
.312	1.1197	.8658	.8793	.9152
.260	1.1511	.8447	.8566	.8981
.208	1.1824	.8200	.8328	.8797
.156	1.1629	.8034	.8311	.8784
.104	1.1943	.7750	.8056	.8582
.052	1.1824	.7637	.8037	.8567
0.000	1.2062	.7486	.7878	.8439
-.052	1.1943	.7505	.7927	.8479
-.104	1.1824	.7666	.8052	.8579
-.156	1.2083	.7751	.8009	.8545
-.208	1.2343	.7972	.8037	.8567
-.260	1.2213	.8118	.8153	.8659
-.312	1.2083	.8330	.8303	.8777
-.364	1.2094	.8532	.8399	.8852
-.416	1.2105	.8767	.8510	.8938
-.468	1.2213	.8830	.8503	.8932
-.520	1.2321	.8979	.8537	.8958
-.572	1.2289	.9070	.8591	.8999
-.624	1.2256	.9194	.8661	.9052
-.676	1.2299	.9186	.8642	.9038
-.728	1.2343	.9279	.8670	.9060
-.780	1.2235	.9316	.8726	.9101
-.832	1.2127	.9437	.8822	.9173
-.884	1.2094	.9426	.8828	.9178
-.936	1.2062	.9449	.8851	.9195
-.988	1.1986	.9497	.8901	.9232
-1.040	1.1910	.9528	.8944	.9263

(ll) x/D = 8.39; y/D = -0.42; $\alpha = 0^o$;

p_∞ = 10 609.23 N/m^2 (221.58 lb/ft^2);
q_∞ = 19 011.74 N/m^2 (397.07 lb/ft^2);
$p_{t,\infty}$ = 45 093.63 N/m^2 (941.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1335	.9725	.9263	.9494
.988	1.1389	.9648	.9204	.9452
.936	1.1443	.9638	.9178	.9433
.884	1.1432	.9590	.9159	.9420
.832	1.1421	.9575	.9156	.9418
.780	1.1302	.9580	.9206	.9454
.728	1.1183	.9534	.9233	.9473
.676	1.1507	.9408	.9042	.9335
.624	1.1831	.9298	.8865	.9205
.572	1.2015	.9264	.8781	.9142
.520	1.2198	.9162	.8666	.9056
.468	1.2220	.9107	.8633	.9031
.416	1.2241	.9103	.8623	.9024
.364	1.1658	.9077	.8824	.9174
.312	1.1076	.9151	.9090	.9370
.260	1.1453	.8913	.8821	.9173
.208	1.1831	.8673	.8562	.8977
.156	1.1550	.8421	.8539	.8959
.104	1.1928	.7991	.8185	.8685
.052	1.1810	.7707	.8078	.8600
0.000	1.2025	.7578	.7938	.8488
-.052	1.1907	.7546	.7961	.8506
-.104	1.1788	.7843	.8157	.8662
-.156	1.2058	.8079	.8185	.8685
-.208	1.2328	.8315	.8213	.8707
-.260	1.2166	.8567	.8392	.8847
-.312	1.2004	.8768	.8546	.8965
-.364	1.2015	.8867	.8591	.8999
-.416	1.2025	.8966	.8635	.9033
-.468	1.2123	.9015	.8624	.9024
-.520	1.2220	.9065	.8613	.9016
-.572	1.2209	.9151	.8658	.9050
-.624	1.2198	.9271	.8718	.9095
-.676	1.2220	.9267	.8708	.9088
-.728	1.2241	.9347	.8738	.9111
-.780	1.2177	.9376	.8775	.9138
-.832	1.2112	.9523	.8867	.9206
-.884	1.2079	.9546	.8890	.9223
-.936	1.2047	.9585	.8920	.9246
-.988	1.1939	.9605	.8969	.9282
-1.040	1.1831	.9642	.9027	.9324

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞ AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 0^o$;
$p_\infty = 4841.52$ N/m^2 (101.12 lb/ft^2);
$q_\infty = 17\ 928.17$ N/m^2 (374.44 lb/ft^2);
$p_{t,\infty} = 60\ 539.80$ N/m^2 (1264.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7864	.7130	.9522	.9759
.988	.7248	.6896	.9754	.9878
.936	.6632	.6697	1.0049	1.0023
.884	.6253	.6463	1.0166	1.0080
.832	.5874	.6263	1.0326	1.0154
.780	.5614	.6073	1.0401	1.0189
.728	.5353	.5982	1.0482	1.0226
.676	.5069	.5676	1.0582	1.0270
.624	.4785	.5539	1.0760	1.0348
.572	.4335	.5450	1.1213	1.0538
.520	.3885	.5395	1.1785	1.0759
.468	.4145	.5376	1.1389	1.0608
.416	.4406	.3906	.9415	.9703
.364	.4619	.1538	.5771	.7119
.312	.4832	.0584	.3477	.4696
.260	.4879	.0121	.1578	.2234
.208	.4927	.0048	.0987	.1408
.156	.4998	0.0000	0.0000	0.0000
.104	.5069	0.0000	0.0000	0.0000
.052	.4927	0.0000	0.0000	0.0000
0.000	.4785	.0023	.0689	.0985
-.104	.4879	.0032	.0810	.1158
-.156	.4879	.0032	.0810	.1158
-.208	.4879	.0032	.0810	.1158
-.260	.4785	.0057	.1091	.1556
-.312	.4785	.0318	.2579	.3576
-.364	.4571	.1066	.4830	.6205
-.416	.4690	.3700	.8882	.9407
-.468	.4477	.5242	1.0821	1.0375
-.520	.4264	.5275	1.1123	1.0501
-.572	.4264	.5398	1.1252	1.0553
-.624	.4264	.5556	1.1415	1.0618
-.676	.4737	.5696	1.0965	1.0436
-.728	.5211	.5871	1.0615	1.0285
-.780	.5543	.6040	1.0439	1.0206
-.832	.5874	.6226	1.0295	1.0140
-.884	.6135	.6452	1.0255	1.0121
-.936	.6395	.6678	1.0218	1.0104
-.988	.6940	.6883	.9958	.9980
-1.040	.7485	.7123	.9755	.9879

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 0^o$;
$p_\infty = 4847.65$ N/m^2 (101.25 lb/ft^2);
$q_\infty = 17\ 950.85$ N/m^2 (374.91 lb/ft^2);
$p_{t,\infty} = 60\ 616.41$ N/m^2 (1266.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6812	.6850	1.0028	1.0014
.988	.6315	.6660	1.0270	1.0129
.936	.5818	.6505	1.0574	1.0267
.884	.5534	.6335	1.0699	1.0322
.832	.5251	.6199	1.0866	1.0394
.780	.5109	.6052	1.0885	1.0402
.728	.4967	.5941	1.0937	1.0424
.676	.4872	.5861	1.0968	1.0437
.624	.4778	.5868	1.1082	1.0484
.572	.5203	.5906	1.0654	1.0302
.520	.5629	.6154	1.0456	1.0214
.468	.6457	.6807	1.0267	1.0127
.416	.7285	.6728	.9610	.9805
.364	.7568	.5693	.8673	.9285
.312	.7852	.3278	.6461	.7720
.260	.7994	.1284	.4008	.5316
.208	.8136	.0425	.2286	.3193
.156	.8183	.0059	.0847	.1211
.104	.8231	.0015	.0420	.0602
.052	.8065	.0090	.1056	.1506
0.000	.7899	.0133	.1297	.1845
-.104	.8041	.0014	.0414	.0593
-.156	.8041	.0014	.0414	.0593
-.208	.8041	.0139	.1315	.1870
-.260	.7758	.0858	.3325	.4513
-.312	.7758	.2279	.5420	.6792
-.364	.6741	.5036	.8643	.9267
-.416	.7474	.6613	.9407	.9698
-.468	.6457	.6549	1.0071	1.0035
-.520	.5440	.5994	1.0497	1.0232
-.572	.4872	.5790	1.0902	1.0409
-.624	.4304	.5779	1.1587	1.0684
-.676	.4541	.5815	1.1316	1.0579
-.728	.4778	.5885	1.1099	1.0491
-.780	.5038	.6006	1.0919	1.0416
-.832	.5298	.6109	1.0739	1.0339
-.884	.5369	.6262	1.0800	1.0366
-.936	.5440	.6467	1.0903	1.0410
-.988	.5865	.6611	1.0616	1.0286
-1.040	.6291	.6825	1.0415	1.0195

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 4852.63\ N/m^2$ (101.35 lb/ft²);
$q_\infty = 17\ 969.29\ N/m^2$ (375.30 lb/ft²);
$p_{t,\infty} = 60\ 678.65\ N/m^2$ (1267.30 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6236	.6729	1.0387	1.0183
.988	.5811	.6586	1.0646	1.0299
.936	.5386	.6495	1.0982	1.0443
.884	.5197	.6353	1.1056	1.0474
.832	.5008	.6245	1.1167	1.0519
.780	.5315	.6448	1.1015	1.0457
.728	.5622	.6930	1.1103	1.0493
.676	.6496	.6901	1.0307	1.0146
.624	.7370	.6923	.9692	.9847
.572	.7960	.6965	.9354	.9670
.520	.8551	.7165	.9154	.9561
.468	.9236	.7322	.8904	.9420
.416	.9921	.7426	.8652	.9272
.364	1.0346	.7533	.8533	.9200
.312	1.0771	.7500	.8344	.9084
.260	1.0913	.6298	.7597	.8587
.208	1.1055	.4610	.6458	.7717
.156	1.1267	.2836	.5017	.6396
.104	1.1480	.2051	.4227	.5561
.052	1.1409	.2224	.4415	.5767
0.000	1.1338	.2429	.4629	.5995
−.104	1.1291	.2015	.4225	.5559
−.156	1.1244	.2285	.4509	.5868
−.208	1.1197	.3712	.5758	.7107
−.260	1.0582	.5764	.7380	.8433
−.312	1.0535	.7161	.8244	.9020
−.364	.9874	.7511	.8722	.9313
−.416	.9874	.7353	.8629	.9258
−.468	.9212	.7246	.8869	.9399
−.520	.8551	.6998	.9046	.9501
−.572	.7819	.6878	.9379	.9683
−.624	.7086	.6863	.9841	.9922
−.676	.6590	.6795	1.0154	1.0074
−.728	.6094	.6779	1.0547	1.0255
−.780	.5646	.6042	1.0345	1.0163
−.832	.5197	.6145	1.0874	1.0397
−.884	.5079	.6259	1.1101	1.0492
−.936	.4960	.6425	1.1381	1.0604
−.988	.5268	.6542	1.1145	1.0510
−1.040	.5575	.6695	1.0959	1.0433

(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^o$;

$p_\infty = 4853.01\ N/m^2$ (101.36 lb/ft²);
$q_\infty = 17\ 970.70\ N/m^2$ (375.33 lb/ft²);
$p_{t,\infty} = 60\ 683.44\ N/m^2$ (1267.40 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3227	1.2214	.9609	.9804
.988	1.3935	1.2143	.9335	.9660
.936	1.4644	1.2054	.9073	.9516
.884	1.4715	1.2014	.9036	.9495
.832	1.4786	1.1991	.9005	.9478
.780	1.4857	1.1986	.8982	.9464
.728	1.4928	1.1928	.8939	.9440
.676	1.4739	1.1925	.8995	.9472
.624	1.4550	1.1922	.9052	.9504
.572	1.4739	1.1872	.8975	.9460
.520	1.4928	1.1840	.8906	.9421
.468	1.5069	1.1812	.8854	.9391
.416	1.5211	1.1766	.8795	.9357
.364	1.4857	1.1793	.8910	.9423
.312	1.4502	1.1820	.9028	.9491
.260	1.4337	1.1816	.9078	.9519
.208	1.4172	1.1828	.9136	.9551
.156	1.4526	1.1784	.9007	.9478
.104	1.4880	1.1774	.8895	.9415
.052	1.4739	1.1785	.8942	.9442
0.000	1.4597	1.1796	.8989	.9469
−.104	1.4502	1.1773	.9010	.9480
−.156	1.4573	1.1767	.8986	.9467
−.208	1.4644	1.1762	.8962	.9453
−.260	1.4124	1.1819	.9148	.9557
−.312	1.4195	1.1866	.9143	.9555
−.364	1.4290	1.1859	.9110	.9536
−.416	1.3747	1.1918	.9311	.9647
−.468	1.3841	1.1928	.9283	.9632
−.520	1.3935	1.1956	.9263	.9621
−.572	1.4337	1.1926	.9120	.9542
−.624	1.4739	1.1895	.8984	.9465
−.676	1.5022	1.1873	.8890	.9412
−.728	1.5305	1.1887	.8813	.9367
−.780	1.4620	1.1957	.9043	.9499
−.832	1.3935	1.2009	.9283	.9632
−.884	1.3558	1.2108	.9450	.9721
−.936	1.3180	1.1996	.9540	.9769
−.988	1.1833	1.1624	.9911	.9956
−1.040	1.0487	1.0113	.9820	.9911

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^o$;

$p_\infty = 4849.95\ N/m^2$ ($101.29\ lb/ft^2$);
$q_\infty = 17\ 959.36\ N/m^2$ ($375.09\ lb/ft^2$);
$p_{t,\infty} = 60\ 645.13\ N/m^2$ ($1266.60\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0984	1.0069	.9574	.9786
.988	1.0629	1.0026	.9712	.9857
.936	1.0273	.9982	.9857	.9930
.884	1.0155	.9921	.9884	.9943
.832	1.0037	.9895	.9929	.9965
.780	.9942	.9850	.9954	.9977
.728	.9847	.9787	.9969	.9985
.676	.9729	.9726	.9999	.9999
.624	.9611	.9700	1.0047	1.0023
.572	.9611	.9648	1.0019	1.0009
.520	.9611	.9613	1.0001	1.0001
.468	.9540	.9583	1.0023	1.0011
.416	.9469	.9554	1.0045	1.0022
.364	.9421	.9523	1.0054	1.0026
.312	.9374	.9491	1.0062	1.0030
.260	.9327	.9495	1.0090	1.0043
.208	.9279	.9481	1.0108	1.0052
.156	.9256	.9448	1.0103	1.0050
.104	.9232	.9432	1.0108	1.0052
.052	.9279	.9428	1.0080	1.0039
0.000	.9327	.9425	1.0053	1.0025
-.104	.9137	.9385	1.0135	1.0065
-.156	.9232	.9378	1.0079	1.0038
-.208	.9327	.9406	1.0043	1.0021
-.260	.9208	.9415	1.0112	1.0054
-.312	.9303	.9460	1.0084	1.0041
-.364	.9398	.9453	1.0030	1.0014
-.416	.9279	.9515	1.0126	1.0061
-.468	.9374	.9560	1.0099	1.0048
-.520	.9469	.9588	1.0063	1.0030
-.572	.9587	.9597	1.0005	1.0002
-.624	.9705	.9658	.9976	.9988
-.676	.9824	.9719	.9947	.9974
-.728	.9942	.9763	.9909	.9956
-.780	.9966	.9831	.9932	.9967
-.832	.9989	.9882	.9946	.9974
-.884	1.0179	.9920	.9872	.9937
-.936	1.0368	.9994	.9818	.9910
-.988	1.0581	1.0030	.9736	.9869
-1.040	1.0794	1.0084	.9666	.9833

(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^o$;

$p_\infty = 4852.63\ N/m^2$ ($101.35\ lb/ft^2$);
$q_\infty = 17\ 969.29\ N/m^2$ ($375.30\ lb/ft^2$);
$p_{t,\infty} = 60\ 678.65\ N/m^2$ ($1267.30\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8700	.8890	1.0109	1.0052
.988	.8393	.8826	1.0255	1.0121
.936	.8086	.8762	1.0410	1.0193
.884	.7920	.8687	1.0473	1.0222
.832	.7755	.8647	1.0560	1.0261
.780	.7755	.8560	1.0506	1.0237
.728	.7755	.8455	1.0442	1.0208
.676	.7589	.8432	1.0541	1.0252
.624	.7424	.8358	1.0610	1.0283
.572	.7329	.8312	1.0650	1.0300
.520	.7234	.8249	1.0678	1.0313
.468	.7093	.8225	1.0769	1.0352
.416	.6951	.8183	1.0850	1.0387
.364	.6927	.8150	1.0847	1.0386
.312	.6903	.8134	1.0855	1.0389
.260	.6927	.8080	1.0800	1.0366
.208	.6951	.8061	1.0769	1.0352
.156	.6903	.8047	1.0797	1.0364
.104	.6856	.8016	1.0813	1.0371
.052	.6856	.7981	1.0789	1.0361
0.000	.6856	.7981	1.0789	1.0361
-.104	.6809	.7970	1.0819	1.0374
-.156	.6974	.7975	1.0693	1.0320
-.208	.7140	.7980	1.0572	1.0266
-.260	.7022	.8042	1.0702	1.0323
-.312	.7187	.8047	1.0581	1.0270
-.364	.7234	.8061	1.0556	1.0259
-.416	.7234	.8114	1.0590	1.0274
-.468	.7282	.8163	1.0588	1.0273
-.520	.7329	.8229	1.0596	1.0277
-.572	.7376	.8278	1.0594	1.0276
-.624	.7424	.8327	1.0591	1.0275
-.676	.7471	.8394	1.0600	1.0278
-.728	.7518	.8478	1.0619	1.0287
-.780	.7660	.8537	1.0557	1.0259
-.832	.7802	.8614	1.0508	1.0237
-.884	.7896	.8677	1.0483	1.0226
-.936	.7991	.8775	1.0479	1.0225
-.988	.8204	.8830	1.0374	1.0177
-1.040	.8417	.8884	1.0274	1.0130

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(g) $x/D = 2.5$; $y/D = 1.0$; $\alpha = 0^o$;

$p_\infty = 4843.82$ N/m^2 (101.17 lb/ft^2);
$q_\infty = 17\ 936.67$ N/m^2 (374.62 lb/ft^2);
$p_{t,\infty} = 60\ 568.53$ N/m^2 (1265.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7060	.7930	1.0598	1.0278
.988	.6776	.7706	1.0665	1.0307
.936	.6491	.7658	1.0861	1.0392
.884	.6349	.7546	1.0902	1.0409
.832	.6207	.7469	1.0970	1.0438
.780	.6231	.7380	1.0883	1.0401
.728	.6254	.7256	1.0771	1.0353
.676	.6136	.7195	1.0829	1.0378
.624	.6017	.7116	1.0875	1.0398
.572	.5852	.7059	1.0983	1.0443
.520	.5686	.6984	1.1083	1.0485
.468	.5473	.6929	1.1253	1.0554
.416	.5259	.6892	1.1448	1.0631
.364	.5283	.6838	1.1377	1.0603
.312	.5307	.6889	1.1394	1.0610
.260	.5354	.6763	1.1239	1.0548
.208	.5401	.6725	1.1158	1.0515
.156	.5354	.6711	1.1196	1.0531
.104	.5307	.6697	1.1234	1.0546
.052	.5354	.6606	1.1108	1.0495
0.000	.5401	.6795	1.1216	1.0539
-.104	.5354	.6717	1.1201	1.0533
-.156	.5496	.6619	1.0974	1.0440
-.208	.5638	.6749	1.0941	1.0426
-.260	.5567	.6702	1.0972	1.0438
-.312	.5709	.6709	1.0840	1.0383
-.364	.5757	.6740	1.0821	1.0375
-.416	.5781	.6809	1.0853	1.0388
-.468	.5828	.6858	1.0848	1.0386
-.520	.5875	.6907	1.0842	1.0384
-.572	.5899	.6993	1.0888	1.0403
-.624	.5923	.7061	1.0919	1.0416
-.676	.5970	.7145	1.0940	1.0425
-.728	.6017	.7212	1.0947	1.0428
-.780	.6112	.7292	1.0923	1.0418
-.832	.6207	.7390	1.0912	1.0413
-.884	.6231	.7494	1.0967	1.0436
-.936	.6254	.7597	1.1021	1.0459
-.988	.6444	.7671	1.0910	1.0413
-1.040	.6633	.7762	1.0817	1.0373

(h) $x/D = 2.5$; $y/D = 0.83$; $\alpha = 0^o$;

$p_\infty = 4839.99$ N/m^2 (101.09 lb/ft^2);
$q_\infty = 17\ 922.50$ N/m^2 (374.32 lb/ft^2);
$p_{t,\infty} = 60\ 520.65$ N/m^2 (1264.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6684	.7668	1.0710	1.0327
.988	.6400	.7427	1.0772	1.0354
.936	.6116	.7360	1.0971	1.0438
.884	.5973	.7266	1.1029	1.0462
.832	.5831	.7154	1.1076	1.0482
.780	.5879	.7063	1.0961	1.0434
.728	.5926	.6938	1.0820	1.0374
.676	.5855	.6873	1.0835	1.0381
.624	.5784	.6791	1.0836	1.0381
.572	.5594	.6735	1.0972	1.0439
.520	.5404	.6696	1.1131	1.0504
.468	.5191	.6624	1.1297	1.0571
.416	.4978	.6588	1.1504	1.0652
.364	.5049	.6565	1.1403	1.0613
.312	.5120	.6595	1.1349	1.0592
.260	.5191	.6555	1.1237	1.0547
.208	.5262	.6549	1.1156	1.0515
.156	.5452	.6588	1.0993	1.0447
.104	.5642	.6819	1.0994	1.0448
.052	.5784	.6773	1.0822	1.0375
0.000	.5926	.6920	1.0806	1.0368
-.104	.5736	.6731	1.0832	1.0379
-.156	.5665	.6490	1.0704	1.0324
-.208	.5594	.6566	1.0834	1.0380
-.260	.5618	.6459	1.0722	1.0332
-.312	.5547	.6464	1.0795	1.0364
-.364	.5594	.6461	1.0747	1.0343
-.416	.5499	.6520	1.0889	1.0404
-.468	.5547	.6552	1.0868	1.0395
-.520	.5594	.6583	1.0848	1.0386
-.572	.5594	.6671	1.0920	1.0417
-.624	.5594	.6724	1.0963	1.0435
-.676	.5665	.6806	1.0961	1.0434
-.728	.5736	.6888	1.0958	1.0433
-.780	.5807	.6988	1.0970	1.0438
-.832	.5879	.7088	1.0981	1.0442
-.884	.5879	.7193	1.1062	1.0476
-.936	.5879	.7316	1.1156	1.0515
-.988	.6068	.7390	1.1035	1.0465
-1.040	.6258	.7481	1.0934	1.0423

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^o$;
p_∞ = 4839.99 N/m^2 (101.09 lb/ft^2);
q_∞ = 17 922.50 N/m^2 (374.32 lb/ft^2);
$p_{t,\infty}$ = 60 520.65 N/m^2 (1264.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6351	.7369	1.0772	1.0354
.988	.6067	.7128	1.0840	1.0383
.936	.5782	.7045	1.1038	1.0466
.884	.5640	.6950	1.1101	1.0492
.832	.5498	.6839	1.1153	1.0513
.780	.5522	.6750	1.1056	1.0474
.728	.5545	.6661	1.0959	1.0433
.676	.5593	.6605	1.0867	1.0394
.624	.5640	.6566	1.0790	1.0361
.572	.6707	.6505	.9848	.9925
.520	.7773	.6932	.9443	.9717
.468	.8911	.7912	.9423	.9707
.416	1.0048	.7948	.8894	.9414
.364	1.0143	.7941	.8848	.9388
.312	1.0238	.7934	.8803	.9361
.260	1.0261	.7914	.8782	.9349
.208	1.0285	.7912	.8771	.9342
.156	1.0380	.7870	.8707	.9305
.104	1.0475	.7845	.8654	.9273
.052	1.0498	.7826	.8634	.9261
0.000	1.0522	.7824	.8623	.9255
-.104	1.0380	.7813	.8676	.9286
-.156	1.0427	.7827	.8664	.9279
-.208	1.0475	.7841	.8652	.9272
-.260	1.0095	.7870	.8829	.9376
-.312	1.0143	.7884	.8816	.9369
-.364	.8413	.8015	.9761	.9882
-.416	.9811	.7909	.8979	.9462
-.468	.8081	.7794	.9821	.9912
-.520	.6351	.6816	1.0360	1.0170
-.572	.5877	.6447	1.0474	1.0222
-.624	.5403	.6482	1.0953	1.0431
-.676	.5427	.6533	1.0972	1.0439
-.728	.5451	.6584	1.0991	1.0446
-.780	.5498	.6668	1.1013	1.0456
-.832	.5545	.6753	1.1035	1.0465
-.884	.5474	.6863	1.1197	1.0531
-.936	.5403	.6991	1.1375	1.0602
-.988	.5640	.7097	1.1217	1.0539
-1.040	.5877	.7202	1.1070	1.0479

(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^o$;
p_∞ = 4845.74 N/m^2 (101.21 lb/ft^2);
q_∞ = 17 943.76 N/m^2 (374.76 lb/ft^2);
$p_{t,\infty}$ = 60 592.47 N/m^2 (1265.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6103	.7012	1.0719	1.0331
.988	.5819	.6894	1.0884	1.0402
.936	.5535	.6810	1.1092	1.0488
.884	.5393	.6716	1.1159	1.0516
.832	.5251	.6639	1.1244	1.0550
.780	.5393	.6576	1.1042	1.0468
.728	.5535	.6949	1.1205	1.0534
.676	.7641	.8119	1.0308	1.0146
.624	.9746	.7961	.9038	.9496
.572	1.0077	.7936	.8874	.9403
.520	1.0408	.7893	.8708	.9305
.468	1.0597	.7843	.8603	.9242
.416	1.0787	.7793	.8500	.9180
.364	1.0716	.7764	.8512	.9187
.312	1.0645	.7752	.8534	.9201
.260	1.0668	.7715	.8504	.9182
.208	1.0692	.7696	.8484	.9170
.156	1.0763	.7620	.8414	.9127
.104	1.0834	.7544	.8345	.9084
.052	1.0834	.7509	.8325	.9072
0.000	1.0834	.7509	.8325	.9072
-.104	1.0739	.7554	.8387	.9110
-.156	1.0787	.7568	.8376	.9103
-.208	1.0834	.7617	.8385	.9109
-.260	1.0621	.7651	.8487	.9172
-.312	1.0668	.7700	.8496	.9177
-.364	1.0550	.7727	.8558	.9215
-.416	1.0503	.7748	.8589	.9234
-.468	1.0385	.7792	.8663	.9278
-.520	1.0266	.7819	.8727	.9317
-.572	1.0077	.7834	.8817	.9369
-.624	.9888	.7866	.8919	.9428
-.676	.7735	.7748	1.0008	1.0004
-.728	.5583	.6453	1.0752	1.0345
-.780	.5488	.6460	1.0850	1.0387
-.832	.5393	.6520	1.0995	1.0448
-.884	.5228	.6619	1.1253	1.0554
-.936	.5062	.6754	1.1551	1.0670
-.988	.5322	.6840	1.1336	1.0587
-1.040	.5583	.6943	1.1152	1.0513

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(k) $x/D = 2.5$; $y/D = 0.21$; $\alpha = 0^\circ$;

$p_\infty = 4846.12$ N/m2 (101.21 lb/ft2);
$q_\infty = 17\,945.18$ N/m2 (374.79 lb/ft2);
$p_{t,\infty} = 60\,597.25$ N/m2 (1265.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6005	.6853	1.0682	1.0315
.988	.5698	.6770	1.0901	1.0409
.936	.5390	.6688	1.1139	1.0508
.884	.5981	.6575	1.0484	1.0227
.832	.6573	.7404	1.0614	1.0285
.780	.8015	.7856	.9900	.9951
.728	.9457	.7747	.9051	.9503
.676	.9670	.7731	.8941	.9441
.624	.9882	.7749	.8855	.9392
.572	1.0213	.7741	.8706	.9304
.520	1.0544	.7716	.8554	.9213
.468	1.0734	.7701	.8470	.9162
.416	1.0923	.7669	.8379	.9105
.364	1.0828	.7606	.8381	.9107
.312	1.0734	.7543	.8383	.9108
.260	1.0663	.7005	.8105	.8931
.208	1.0592	.6343	.7739	.8686
.156	1.0710	.5223	.6983	.8137
.104	1.0828	.4432	.6398	.7667
.052	1.0828	.3895	.5998	.7323
0.000	1.0828	.3625	.5786	.7133
-.104	1.0734	.4190	.6248	.7540
-.156	1.0757	.4902	.6750	.7954
-.208	1.0781	.5910	.7404	.8450
-.260	1.0710	.6658	.7884	.8785
-.312	1.0734	.7255	.8221	.9006
-.364	1.0568	.7531	.8442	.9144
-.416	1.0686	.7610	.8439	.9142
-.468	1.0521	.7658	.8532	.9199
-.520	1.0355	.7671	.8607	.9245
-.572	1.0119	.7654	.8697	.9299
-.624	.9882	.7655	.8801	.9360
-.676	.9646	.7673	.8919	.9428
-.728	.9410	.7673	.9030	.9492
-.780	.7849	.7826	.9985	.9993
-.832	.6289	.6663	1.0293	1.0139
-.884	.5627	.6467	1.0721	1.0331
-.936	.4965	.6620	1.1548	1.0669
-.988	.5178	.6692	1.1369	1.0600
-1.040	.5390	.6799	1.1231	1.0545

(l) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 4850.33$ N/m2 (101.30 lb/ft2);
$q_\infty = 17\,960.78$ N/m2 (375.12 lb/ft2);
$p_{t,\infty} = 60\,649.92$ N/m2 (1266.70 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6571	.7310	1.0547	1.0255
.988	.6737	.7385	1.0470	1.0220
.936	.6902	.7233	1.0237	1.0113
.884	.6879	.7096	1.0156	1.0075
.832	.6855	.7132	1.0200	1.0096
.780	.7588	.7252	.9776	.9889
.728	.8321	.7546	.9523	.9760
.676	.9101	.7732	.9217	.9596
.624	.9881	.7795	.8882	.9407
.572	1.0283	.7764	.8689	.9294
.520	1.0684	.7733	.8507	.9184
.468	1.0897	.7681	.8396	.9116
.416	1.1110	.7612	.8277	.9041
.364	1.0992	.7533	.8279	.9042
.312	1.0873	.7280	.8182	.8981
.260	1.0732	.6343	.7688	.8651
.208	1.0590	.5263	.7050	.8187
.156	1.0613	.4000	.6139	.7447
.104	1.0637	.3476	.5717	.7069
.052	1.0590	.3372	.5643	.7001
0.000	1.0543	.3395	.5675	.7031
-.104	1.0448	.3374	.5682	.7038
-.156	1.0590	.3615	.5842	.7184
-.208	1.0732	.4573	.6528	.7775
-.260	1.0637	.5878	.7434	.8472
-.312	1.0779	.6874	.7986	.8853
-.364	1.0637	.7432	.8359	.9093
-.416	1.0826	.7576	.8365	.9097
-.468	1.0684	.7622	.8446	.9147
-.520	1.0543	.7650	.8519	.9191
-.572	1.0212	.7676	.8670	.9283
-.624	.9881	.7684	.8819	.9370
-.676	.8982	.7559	.9174	.9572
-.728	.8084	.7346	.9533	.9764
-.780	.7588	.7138	.9699	.9850
-.832	.7091	.7034	.9960	.9980
-.884	.6902	.7048	1.0105	1.0051
-.936	.6713	.7220	1.0371	1.0175
-.988	.6193	.7399	1.0930	1.0421
-1.040	.5673	.6876	1.1009	1.0454

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(m) $x/D = 2.5$; $y/D = -0.42$; $\alpha = 0^o$;

$p_\infty = 4847.65$ N/m^2 (101.25 lb/ft^2);
$q_\infty = 17\ 950.85$ N/m^2 (374.91 lb/ft^2);
$p_{t,\infty} = 60\ 616.41$ N/m^2 (1266.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7281	.7263	.9987	.9994
.988	.6619	.7050	1.0320	1.0152
.936	.5957	.6854	1.0727	1.0334
.884	.5745	.6678	1.0782	1.0358
.832	.5532	.6572	1.0899	1.0408
.780	.5414	.6476	1.0937	1.0424
.728	.5295	.6397	1.0991	1.0447
.676	.5106	.6219	1.1036	1.0465
.624	.4917	.6041	1.1084	1.0485
.572	.7518	.7751	1.0154	1.0074
.520	1.0118	.7624	.8681	.9289
.468	1.0283	.7489	.8534	.9201
.416	1.0449	.7318	.8369	.9099
.364	1.0331	.7205	.8351	.9088
.312	1.0213	.7161	.8374	.9102
.260	1.0260	.7298	.8434	.9139
.208	1.0307	.7294	.8412	.9126
.156	1.0402	.7234	.8340	.9081
.104	1.0496	.7262	.8318	.9067
.052	1.0520	.7015	.8166	.8970
0.000	1.0543	.6134	.7628	.8609
-.104	1.0402	.7270	.8360	.9094
-.156	1.0449	.7196	.8299	.9055
-.208	1.0496	.7280	.8328	.9074
-.260	1.0354	.7256	.8371	.9100
-.312	1.0402	.7024	.8217	.9003
-.364	1.0189	.7128	.8364	.9096
-.416	1.0307	.7295	.8413	.9126
-.468	1.0094	.7452	.8592	.9236
-.520	.9882	.7557	.8745	.9327
-.572	.7139	.6220	.9334	.9659
-.624	.4397	.6072	1.1752	1.0746
-.676	.4846	.6232	1.1340	1.0589
-.728	.5295	.6340	1.0942	1.0426
-.780	.5437	.6399	1.0849	1.0387
-.832	.5579	.6512	1.0804	1.0367
-.884	.5603	.6650	1.0895	1.0406
-.936	.5626	.6876	1.1055	1.0473
-.988	.6170	.7064	1.0700	1.0322
-1.040	.6714	.7269	1.0406	1.0191

(n) $x/D = 3.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 4845.35$ N/m^2 (101.20 lb/ft^2);
$q_\infty = 17\ 942.35$ N/m^2 (374.73 lb/ft^2);
$p_{t,\infty} = 60\ 587.68$ N/m^2 (1265.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7378	.7486	1.0073	1.0035
.988	.8040	.7664	.9764	.9883
.936	.8702	.8278	.9754	.9878
.884	.9458	.8379	.9412	.9701
.832	1.0215	.8286	.9007	.9478
.780	1.0357	.8188	.8891	.9413
.728	1.0499	.8072	.8768	.9341
.676	1.0428	.7937	.8724	.9315
.624	1.0357	.7855	.8709	.9306
.572	1.0357	.7768	.8660	.9277
.520	1.0357	.7680	.8611	.9247
.468	1.0404	.7571	.8531	.9199
.416	1.0451	.7462	.8450	.9149
.364	1.0310	.7263	.8393	.9114
.312	1.0168	.6958	.8273	.9038
.260	1.0073	.6158	.7819	.8741
.208	.9979	.5391	.7350	.8411
.156	1.0002	.4593	.6777	.7975
.104	1.0026	.4183	.6459	.7718
.052	1.0026	.4004	.6320	.7601
0.000	1.0026	.3969	.6292	.7577
-.104	.9884	.4146	.6477	.7732
-.156	.9979	.4334	.6591	.7826
-.208	1.0073	.4896	.6972	.8128
-.260	1.0073	.5853	.7623	.8606
-.312	1.0168	.6570	.8038	.8887
-.364	1.0215	.7095	.8334	.9077
-.416	1.0262	.7391	.8486	.9172
-.468	1.0310	.7493	.8525	.9195
-.520	1.0357	.7612	.8573	.9224
-.572	1.0357	.7700	.8622	.9254
-.624	1.0357	.7788	.8672	.9284
-.676	1.0404	.7890	.8708	.9306
-.728	1.0451	.7992	.8745	.9327
-.780	1.0310	.8073	.8849	.9388
-.832	1.0168	.8154	.8955	.9449
-.884	.9293	.8221	.9406	.9698
-.936	.8418	.7936	.9709	.9856
-.988	.7638	.7573	.9957	.9979
-1.040	.6857	.7438	1.0415	1.0195

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(o) $x/D = 4.0$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 4839.61 N/m^2 (101.08 lb/ft^2);
q_∞ = 17 921.06 N/m^2 (374.29 lb/ft^2);
$p_{t,\infty}$ = 60 515.86 N/m^2 (1263.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0277	.8765	.9235	.9606
.988	1.0206	.8613	.9187	.9579
.936	1.0135	.8513	.9165	.9567
.884	1.0182	.8370	.9066	.9512
.832	1.0230	.8278	.8996	.9472
.780	1.0253	.8136	.8908	.9422
.728	1.0277	.8012	.8829	.9377
.676	1.0206	.7877	.8785	.9351
.624	1.0135	.7795	.8770	.9342
.572	1.0158	.7723	.8719	.9312
.520	1.0182	.7616	.8648	.9270
.468	1.0182	.7475	.8568	.9222
.416	1.0182	.7317	.8477	.9166
.364	1.0087	.7062	.8367	.9098
.312	.9993	.6753	.8221	.9005
.260	.9945	.6176	.7881	.8782
.208	.9898	.5687	.7580	.8576
.156	.9993	.5150	.7179	.8285
.104	1.0087	.4894	.6965	.8123
.052	1.0158	.4675	.6784	.7981
0.000	1.0230	.4580	.6692	.7907
-.104	1.0040	.4781	.6901	.8073
-.156	1.0016	.4943	.7025	.8169
-.208	.9993	.5318	.7295	.8371
-.260	.9969	.5852	.7662	.8633
-.312	.9945	.6402	.8023	.8877
-.364	.9969	.6841	.8284	.9046
-.416	.9898	.7182	.8518	.9191
-.468	.9922	.7374	.8621	.9253
-.520	.9945	.7513	.8691	.9296
-.572	.9993	.7633	.8740	.9324
-.624	1.0040	.7717	.8767	.9340
-.676	1.0064	.7786	.8796	.9357
-.728	1.0087	.7907	.8854	.9391
-.780	1.0040	.8016	.8936	.9438
-.832	.9993	.8126	.9018	.9485
-.884	.9945	.8217	.9090	.9525
-.936	.9898	.8326	.9172	.9571
-.988	.9874	.8399	.9223	.9599
-1.040	.9851	.8488	.9283	.9632

(p) $x/D = 5.0$; $y/D = 3.0$; $\alpha = 0^o$;

p_∞ = 4845.35 N/m^2 (101.20 lb/ft^2);
q_∞ = 17 942.35 N/m^2 (374.73 lb/ft^2);
$p_{t,\infty}$ = 60 587.68 N/m^2 (1265.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9704	.9706	1.0001	1.0001
.988	.9467	.9724	1.0135	1.0065
.936	.9230	.9724	1.0264	1.0126
.884	.9207	.9726	1.0278	1.0132
.832	.9183	.9727	1.0292	1.0139
.780	.9183	.9692	1.0274	1.0130
.728	.9183	.9658	1.0255	1.0122
.676	.9112	.9645	1.0288	1.0137
.624	.9041	.9633	1.0322	1.0153
.572	.9041	.9616	1.0313	1.0148
.520	.9041	.9616	1.0313	1.0148
.468	.8970	.9603	1.0347	1.0164
.416	.8899	.9609	1.0391	1.0184
.364	.8899	.9574	1.0372	1.0176
.312	.8899	.9574	1.0372	1.0176
.260	.8875	.9541	1.0368	1.0174
.208	.8852	.9542	1.0383	1.0181
.156	.8852	.9525	1.0373	1.0176
.104	.8852	.9525	1.0373	1.0176
.052	.8875	.9506	1.0349	1.0165
0.000	.8899	.9504	1.0334	1.0158
-.104	.8804	.9451	1.0361	1.0170
-.156	.8899	.9444	1.0302	1.0143
-.208	.8994	.9437	1.0243	1.0116
-.260	.8852	.9447	1.0331	1.0157
-.312	.8946	.9458	1.0282	1.0134
-.364	.8946	.9458	1.0282	1.0134
-.416	.8899	.9462	1.0311	1.0148
-.468	.8899	.9479	1.0321	1.0152
-.520	.8899	.9479	1.0321	1.0152
-.572	.8923	.9477	1.0306	1.0145
-.624	.8946	.9528	1.0320	1.0152
-.676	.8970	.9526	1.0305	1.0145
-.728	.8994	.9525	1.0291	1.0138
-.780	.9017	.9558	1.0295	1.0140
-.832	.9041	.9574	1.0290	1.0138
-.884	.9088	.9588	1.0271	1.0129
-.936	.9136	.9619	1.0261	1.0124
-.988	.9254	.9628	1.0200	1.0096
-1.040	.9372	.9619	1.0131	1.0063

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^o$;

$p_\infty = 4845.35\ N/m^2$ (101.20 lb/ft^2);
$q_\infty = 17\ 942.35\ N/m^2$ (374.73 lb/ft^2);
$p_{t,\infty} = 60\ 587.68\ N/m^2$ (1265.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7525	.8809	1.0820	1.0374
.988	.7383	.8645	1.0822	1.0375
.936	.7241	.8621	1.0912	1.0413
.884	.7146	.8628	1.0988	1.0445
.832	.7051	.8600	1.1044	1.0468
.780	.7146	.8593	1.0966	1.0436
.728	.7241	.8551	1.0867	1.0395
.676	.7146	.8541	1.0932	1.0422
.624	.7051	.8530	1.0999	1.0450
.572	.7028	.8515	1.1007	1.0453
.520	.7004	.8499	1.1016	1.0457
.468	.6862	.8509	1.1136	1.0506
.416	.6720	.8485	1.1237	1.0547
.364	.6767	.8464	1.1183	1.0526
.312	.6815	.8443	1.1131	1.0504
.260	.6838	.8424	1.1099	1.0491
.208	.6862	.8422	1.1079	1.0483
.156	.6815	.8408	1.1108	1.0495
.104	.6767	.8412	1.1149	1.0512
.052	.6791	.8375	1.1105	1.0494
0.000	.6815	.8408	1.1108	1.0495
-.104	.6767	.8356	1.1112	1.0497
-.156	.6957	.8325	1.0939	1.0425
-.208	.7146	.8328	1.0796	1.0364
-.260	.6909	.8363	1.1002	1.0451
-.312	.7099	.8349	1.0845	1.0385
-.364	.7099	.8349	1.0845	1.0385
-.416	.7051	.8353	1.0884	1.0401
-.468	.7051	.8353	1.0884	1.0401
-.520	.7051	.8370	1.0895	1.0406
-.572	.7028	.8372	1.0915	1.0415
-.624	.7004	.8391	1.0946	1.0428
-.676	.6933	.8414	1.1016	1.0457
-.728	.6862	.8419	1.1077	1.0482
-.780	.6909	.8433	1.1048	1.0470
-.832	.6957	.8447	1.1019	1.0458
-.884	.6980	.8481	1.1022	1.0460
-.936	.7004	.8496	1.1014	1.0456
-.988	.7075	.8509	1.0967	1.0436
-1.040	.7146	.8521	1.0920	1.0417

(r) $x/D = 5.0$; $y/D = 1.5$; $\alpha = 0^o$;

$p_\infty = 4849.18\ N/m^2$ (101.28 lb/ft^2);
$q_\infty = 17\ 956.53\ N/m^2$ (375.03 lb/ft^2);
$p_{t,\infty} = 60\ 635.56\ N/m^2$ (1266.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0545	.9827	.9654	.9827
.988	1.0403	.9803	.9707	.9854
.936	1.0261	.9813	.9779	.9891
.884	1.0261	.9831	.9788	.9895
.832	1.0261	.9813	.9779	.9891
.780	1.0261	.9813	.9779	.9891
.728	1.0261	.9744	.9744	.9873
.676	1.0214	.9730	.9760	.9881
.624	1.0167	.9698	.9767	.9885
.572	1.0238	.9675	.9722	.9862
.520	1.0309	.9653	.9677	.9839
.468	1.0261	.9639	.9692	.9847
.416	1.0214	.9607	.9698	.9850
.364	1.0167	.9576	.9705	.9853
.312	1.0119	.9562	.9721	.9861
.260	1.0072	.9531	.9727	.9865
.208	1.0025	.9517	.9743	.9873
.156	1.0072	.9496	.9710	.9856
.104	1.0119	.9492	.9685	.9843
.052	1.0143	.9473	.9664	.9832
0.000	1.0167	.9489	.9661	.9831
-.104	1.0025	.9398	.9682	.9842
-.156	1.0072	.9395	.9658	.9829
-.208	1.0119	.9444	.9660	.9831
-.260	1.0001	.9470	.9731	.9867
-.312	1.0049	.9484	.9715	.9859
-.364	1.0025	.9486	.9728	.9865
-.416	.9978	.9507	.9761	.9882
-.468	.9954	.9527	.9783	.9893
-.520	.9930	.9546	.9805	.9904
-.572	.9978	.9542	.9779	.9891
-.624	1.0025	.9556	.9764	.9883
-.676	1.0049	.9572	.9760	.9881
-.728	1.0072	.9606	.9766	.9884
-.780	1.0025	.9627	.9799	.9901
-.832	.9978	.9630	.9824	.9913
-.884	1.0049	.9695	.9823	.9913
-.936	1.0119	.9707	.9794	.9898
-.988	1.0119	.9725	.9803	.9903
-1.040	1.0119	.9743	.9812	.9907

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^o$;

p_∞ = 4856.46 N/m^2 (101.43 lb/ft^2);
q_∞ = 17 983.47 N/m^2 (375.59 lb/ft^2);
$p_{t,\infty}$ = 60 726.53 N/m^2 (1268.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0494	.9368	.9448	.9720
.988	1.0234	.9335	.9551	.9774
.936	.9974	.9267	.9639	.9820
.884	.9926	.9184	.9619	.9809
.832	.9879	.9135	.9616	.9808
.780	.9856	.9067	.9592	.9795
.728	.9832	.8982	.9558	.9778
.676	.9832	.8930	.9530	.9763
.624	.9832	.8877	.9502	.9749
.572	.9879	.8804	.9440	.9716
.520	.9926	.8748	.9388	.9688
.468	.9879	.8700	.9384	.9686
.416	.9832	.8633	.9371	.9679
.364	.9832	.8581	.9342	.9664
.312	.9832	.8529	.9314	.9648
.260	.9808	.8478	.9297	.9639
.208	.9785	.8463	.9300	.9641
.156	.9808	.8409	.9259	.9619
.104	.9832	.8389	.9237	.9607
.052	.9832	.8389	.9237	.9607
0.000	.9832	.8372	.9228	.9601
-.104	.9737	.8342	.9256	.9617
-.156	.9785	.8339	.9232	.9604
-.208	.9832	.8353	.9217	.9596
-.260	.9714	.8414	.9307	.9645
-.312	.9761	.8446	.9302	.9642
-.364	.9714	.8467	.9336	.9660
-.416	.9690	.8521	.9377	.9682
-.468	.9643	.8595	.9441	.9716
-.520	.9596	.8633	.9485	.9740
-.572	.9619	.8702	.9511	.9753
-.624	.9643	.8735	.9518	.9757
-.676	.9690	.8801	.9530	.9763
-.728	.9737	.8868	.9543	.9770
-.780	.9690	.8924	.9597	.9798
-.832	.9643	.8998	.9660	.9830
-.884	.9714	.9062	.9659	.9830
-.936	.9785	.9127	.9658	.9829
-.988	.9903	.9171	.9623	.9812
-1.040	1.0021	.9232	.9598	.9799

(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^o$;

p_∞ = 4855.69 N/m^2 (101.41 lb/ft^2);
q_∞ = 17 980.63 N/m^2 (375.53 lb/ft^2);
$p_{t,\infty}$ = 60 716.96 N/m^2 (1268.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0306	.9140	.9417	.9704
.988	1.0070	.9088	.9500	.9748
.936	.9833	.9019	.9577	.9788
.884	.9833	.8967	.9549	.9773
.832	.9833	.8897	.9512	.9754
.780	.9833	.8810	.9465	.9729
.728	.9833	.8723	.9418	.9704
.676	.9833	.8636	.9371	.9679
.624	.9833	.8548	.9324	.9654
.572	.9928	.8472	.9237	.9607
.520	1.0023	.8412	.9161	.9565
.468	.9999	.8327	.9125	.9545
.416	.9975	.8276	.9109	.9536
.364	.9904	.8194	.9096	.9529
.312	.9833	.8165	.9112	.9538
.260	.9810	.8114	.9095	.9528
.208	.9786	.8099	.9097	.9529
.156	.9810	.8044	.9056	.9506
.104	.9833	.8025	.9034	.9494
.052	.9881	.8004	.9000	.9475
0.000	.9928	.8001	.8977	.9462
-.104	.9786	.7972	.9026	.9489
-.156	.9810	.7988	.9024	.9488
-.208	.9833	.7986	.9012	.9481
-.260	.9763	.8009	.9058	.9507
-.312	.9786	.8078	.9085	.9523
-.364	.9739	.8081	.9109	.9536
-.416	.9739	.8151	.9149	.9558
-.468	.9692	.8208	.9203	.9588
-.520	.9644	.8281	.9266	.9623
-.572	.9668	.8350	.9293	.9637
-.624	.9692	.8436	.9330	.9657
-.676	.9692	.8488	.9359	.9672
-.728	.9692	.8576	.9407	.9698
-.780	.9621	.8634	.9473	.9733
-.832	.9550	.8709	.9550	.9773
-.884	.9573	.8778	.9575	.9787
-.936	.9597	.8863	.9610	.9805
-.988	.9715	.8907	.9575	.9787
-1.040	.9833	.9003	.9569	.9783

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(u) $x/D = 5.0$; $y/D = 0.63$; $\alpha = 0^o$;
$p_\infty = 4854.54$ N/m^2 (101.39 lb/ft^2);
$q_\infty = 17\,976.38$ N/m^2 (375.44 lb/ft^2);
$p_{t,\infty} = 60\,702.59$ N/m^2 (1267.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0344	.9011	.9333	.9659
.988	1.0226	.8933	.9346	.9666
.936	1.0108	.8854	.9359	.9673
.884	1.0108	.8732	.9294	.9638
.832	1.0108	.8627	.9238	.9607
.780	1.0108	.8523	.9182	.9576
.728	1.0108	.8383	.9107	.9535
.676	1.0085	.8280	.9061	.9509
.624	1.0061	.8212	.9034	.9494
.572	1.0156	.8117	.8940	.9441
.520	1.0250	.8058	.8866	.9398
.468	1.0321	.8017	.8814	.9367
.416	1.0392	.7959	.8752	.9331
.364	1.0368	.7926	.8743	.9326
.312	1.0344	.7910	.8745	.9327
.260	1.0321	.7842	.8717	.9311
.208	1.0297	.7827	.8718	.9311
.156	1.0415	.7783	.8644	.9267
.104	1.0533	.7738	.8571	.9223
.052	1.0557	.7719	.8551	.9211
0.000	1.0581	.7717	.8540	.9205
-.104	1.0439	.7714	.8596	.9238
-.156	1.0392	.7717	.8618	.9251
-.208	1.0344	.7756	.8659	.9276
-.260	1.0203	.7785	.8735	.9321
-.312	1.0156	.7788	.8757	.9334
-.364	1.0085	.7829	.8811	.9366
-.416	.9967	.7855	.8878	.9405
-.468	.9896	.7861	.8913	.9425
-.520	.9825	.7919	.8978	.9462
-.572	.9825	.7989	.9017	.9484
-.624	.9825	.8077	.9067	.9512
-.676	.9849	.8163	.9104	.9533
-.728	.9872	.8266	.9151	.9559
-.780	.9849	.8391	.9230	.9603
-.832	.9825	.8463	.9281	.9630
-.884	.9849	.8549	.9317	.9650
-.936	.9872	.8652	.9362	.9674
-.988	.9872	.8705	.9390	.9689
-1.040	.9872	.8792	.9437	.9714

(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^o$;
$p_\infty = 4857.61$ N/m^2 (101.45 lb/ft^2);
$q_\infty = 17\,987.72$ N/m^2 (375.68 lb/ft^2);
$p_{t,\infty} = 60\,740.90$ N/m^2 (1268.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0902	.9057	.9115	.9539
.988	1.0737	.8861	.9084	.9522
.936	1.0572	.8769	.9107	.9535
.884	1.0595	.8645	.9033	.9493
.832	1.0619	.8556	.8976	.9461
.780	1.0690	.8446	.8889	.9411
.728	1.0760	.8300	.8783	.9349
.676	1.0855	.8206	.8695	.9297
.624	1.0949	.8216	.8663	.9278
.572	1.1185	.8163	.8543	.9206
.520	1.1421	.8110	.8427	.9135
.468	1.1515	.8032	.8352	.9088
.416	1.1610	.7920	.8259	.9030
.364	1.1421	.7795	.8261	.9031
.312	1.1232	.7652	.8254	.9027
.260	1.1114	.7399	.8159	.8966
.208	1.0996	.7164	.8071	.8909
.156	1.1067	.6948	.7923	.8811
.104	1.1138	.6767	.7795	.8724
.052	1.1114	.6594	.7702	.8661
0.000	1.1091	.6473	.7640	.8617
-.104	1.0949	.6631	.7782	.8716
-.156	1.0925	.6756	.7864	.8771
-.208	1.0902	.7005	.8016	.8872
-.260	1.0878	.7218	.8146	.8957
-.312	1.0855	.7431	.8274	.9039
-.364	1.0737	.7616	.8422	.9132
-.416	1.0807	.7768	.8478	.9167
-.468	1.0690	.7865	.8578	.9227
-.520	1.0572	.7909	.8650	.9271
-.572	1.0501	.7968	.8711	.9307
-.624	1.0430	.8008	.8762	.9337
-.676	1.0288	.8037	.8838	.9382
-.728	1.0147	.8047	.8906	.9421
-.780	1.0052	.8142	.9000	.9475
-.832	.9958	.8237	.9095	.9528
-.884	.9982	.8323	.9132	.9548
-.936	1.0005	.8462	.9196	.9584
-.988	1.0076	.8561	.9218	.9596
-1.040	1.0147	.8696	.9258	.9618

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(w) $x/D = 5.0$; $y/D = 0.21$; $\alpha = 0^\circ$;

$p_\infty = 4851.10$ N/m2 (101.32 lb/ft2);
$q_\infty = 17\,963.61$ N/m2 (375.18 lb/ft2);
$p_{t,\infty} = 60\,659.50$ N/m2 (1266.90 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1586	.9158	.8891	.9412
.988	1.1491	.9060	.8880	.9406
.936	1.1396	.8910	.8842	.9384
.884	1.1467	.8783	.8751	.9331
.832	1.1538	.8672	.8670	.9282
.780	1.1609	.8492	.8553	.9212
.728	1.1680	.8329	.8444	.9146
.676	1.1586	.8196	.8411	.9125
.624	1.1491	.8116	.8404	.9121
.572	1.1586	.8039	.8330	.9074
.520	1.1680	.7961	.8256	.9028
.468	1.1704	.7802	.8165	.8969
.416	1.1727	.7572	.8035	.8885
.364	1.1562	.7252	.7920	.8809
.312	1.1396	.6862	.7760	.8700
.260	1.1302	.6396	.7523	.8535
.208	1.1207	.5911	.7262	.8347
.156	1.1231	.5503	.7000	.8149
.104	1.1255	.5165	.6775	.7974
.052	1.1255	.5042	.6693	.7909
0.000	1.1255	.4917	.6610	.7842
-.104	1.1207	.4972	.6661	.7883
-.156	1.1160	.5208	.6831	.8018
-.208	1.1113	.5584	.7089	.8217
-.260	1.1136	.5990	.7334	.8399
-.312	1.1089	.6471	.7639	.8617
-.364	1.1113	.6928	.7896	.8793
-.416	1.1065	.7372	.8162	.8968
-.468	1.1089	.7652	.8307	.9060
-.520	1.1113	.7809	.8383	.9108
-.572	1.1207	.7907	.8400	.9118
-.624	1.1302	.7970	.8398	.9117
-.676	1.1326	.8074	.8443	.9145
-.728	1.1349	.8213	.8507	.9184
-.780	1.1184	.8331	.8631	.9259
-.832	1.1018	.8432	.8748	.9329
-.884	1.0947	.8525	.8825	.9374
-.936	1.0876	.8618	.8902	.9418
-.988	1.0805	.8659	.8952	.9447
-1.040	1.0734	.8822	.9066	.9512

(x) $x/D = 5.0$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 4855.31$ N/m2 (101.41 lb/ft2);
$q_\infty = 17\,979.21$ N/m2 (375.50 lb/ft2);
$p_{t,\infty} = 60\,712.17$ N/m2 (1268.00 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1909	.9189	.8784	.9350
.988	1.1791	.9058	.8765	.9339
.936	1.1673	.8927	.8745	.9327
.884	1.1696	.8786	.8667	.9281
.832	1.1720	.8696	.8614	.9249
.780	1.1767	.8535	.8517	.9190
.728	1.1815	.8392	.8428	.9136
.676	1.1696	.8261	.8404	.9121
.624	1.1578	.8165	.8398	.9117
.572	1.1625	.8056	.8325	.9071
.520	1.1673	.7947	.8251	.9025
.468	1.1720	.7786	.8151	.8960
.416	1.1767	.7537	.8003	.8864
.364	1.1625	.7268	.7907	.8800
.312	1.1484	.6981	.7797	.8726
.260	1.1413	.6565	.7584	.8579
.208	1.1342	.6219	.7405	.8451
.156	1.1342	.5849	.7181	.8286
.104	1.1342	.5567	.7006	.8154
.052	1.1389	.5351	.6854	.8036
0.000	1.1436	.5187	.6735	.7942
-.104	1.1342	.5436	.6923	.8090
-.156	1.1295	.5671	.7086	.8215
-.208	1.1247	.5887	.7235	.8326
-.260	1.1247	.6223	.7438	.8475
-.312	1.1200	.6615	.7685	.8649
-.364	1.1200	.6985	.7897	.8794
-.416	1.1153	.7377	.8133	.8949
-.468	1.1153	.7623	.8267	.9035
-.520	1.1153	.7816	.8372	.9101
-.572	1.1247	.7932	.8398	.9117
-.624	1.1342	.8030	.8414	.9127
-.676	1.1436	.8128	.8431	.9137
-.728	1.1531	.8262	.8465	.9158
-.780	1.1460	.8390	.8556	.9214
-.832	1.1389	.8501	.8640	.9265
-.884	1.1436	.8603	.8673	.9285
-.936	1.1484	.8757	.8733	.9320
-.988	1.1484	.8898	.8802	.9361
-1.040	1.1484	.9003	.8854	.9391

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^o$;
$p_\infty = 4851.86$ N/m^2 (101.33 lb/ft^2);
$q_\infty = 17\,966.45$ N/m^2 (375.24 lb/ft^2);
$p_{t,\infty} = 60\,669.07$ N/m^2 (1267.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2157	.9370	.8779	.9347
.988	1.1897	.9250	.8818	.9370
.936	1.1636	.9130	.8858	.9393
.884	1.1565	.8943	.8793	.9356
.832	1.1495	.8791	.8745	.9327
.780	1.1495	.8633	.8666	.9281
.728	1.1495	.8458	.8578	.9228
.676	1.1376	.8257	.8520	.9192
.624	1.1258	.8091	.8478	.9166
.572	1.1329	.7928	.8365	.9097
.520	1.1400	.7765	.8253	.9026
.468	1.1495	.7547	.8103	.8929
.416	1.1589	.7346	.7962	.8837
.364	1.1400	.7607	.8169	.8972
.312	1.1211	.7727	.8302	.9057
.260	1.1140	.7662	.8294	.9052
.208	1.1069	.7615	.8295	.9052
.156	1.1140	.7505	.8208	.8997
.104	1.1211	.7359	.8102	.8929
.052	1.1234	.6971	.7877	.8780
0.000	1.1258	.6635	.7677	.8643
-.104	1.1116	.7245	.8073	.8910
-.156	1.1045	.7426	.8200	.8992
-.208	1.0974	.7520	.8278	.9042
-.260	1.1045	.7567	.8277	.9041
-.312	1.0974	.7643	.8345	.9084
-.364	1.0951	.7645	.8355	.9091
-.416	1.0974	.7291	.8151	.8961
-.468	1.0951	.7434	.8239	.9017
-.520	1.0927	.7664	.8375	.9103
-.572	1.1045	.7831	.8420	.9131
-.624	1.1163	.7998	.8464	.9158
-.676	1.1234	.8168	.8527	.9196
-.728	1.1305	.8356	.8597	.9239
-.780	1.1282	.8481	.8670	.9283
-.832	1.1258	.8641	.8761	.9337
-.884	1.1376	.8808	.8799	.9359
-.936	1.1495	.8939	.8819	.9370
-.988	1.1613	.9088	.8846	.9387
-1.040	1.1731	.9255	.8882	.9407

(z) $x/D = 6.0$; $y/D = 0.0$; $\alpha = 0^o$;
$p_\infty = 4848.80$ N/m^2 (101.27 lb/ft^2);
$q_\infty = 17\,955.11$ N/m^2 (375.00 lb/ft^2);
$p_{t,\infty} = 60\,630.77$ N/m^2 (1266.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1404	.8961	.8864	.9397
.988	1.1168	.8804	.8879	.9405
.936	1.0931	.8717	.8930	.9435
.884	1.0884	.8546	.8861	.9395
.832	1.0837	.8445	.8828	.9376
.780	1.0884	.8319	.8742	.9326
.728	1.0931	.8210	.8666	.9280
.676	1.0860	.8075	.8623	.9255
.624	1.0789	.7993	.8607	.9245
.572	1.0837	.7884	.8530	.9198
.520	1.0884	.7775	.8452	.9151
.468	1.0979	.7663	.8355	.9090
.416	1.1073	.7480	.8219	.9004
.364	1.0955	.7279	.8151	.8961
.312	1.0837	.7025	.8052	.8896
.260	1.0789	.6748	.7908	.8801
.208	1.0742	.6541	.7803	.8730
.156	1.0766	.6275	.7635	.8614
.104	1.0789	.5974	.7441	.8477
.052	1.0908	.5700	.7229	.8322
0.000	1.1026	.5549	.7094	.8221
-.104	1.0884	.5721	.7250	.8338
-.156	1.0813	.5975	.7433	.8471
-.208	1.0742	.6264	.7636	.8615
-.260	1.0766	.6456	.7744	.8690
-.312	1.0695	.6762	.7952	.8830
-.364	1.0695	.7045	.8116	.8938
-.416	1.0647	.7278	.8268	.9035
-.468	1.0647	.7472	.8377	.9104
-.520	1.0647	.7648	.8475	.9165
-.572	1.0695	.7785	.8532	.9200
-.624	1.0742	.7870	.8559	.9216
-.676	1.0813	.7970	.8585	.9232
-.728	1.0884	.8070	.8611	.9247
-.780	1.0837	.8197	.8697	.9299
-.832	1.0789	.8342	.8793	.9355
-.884	1.0860	.8459	.8826	.9374
-.936	1.0931	.8595	.8867	.9398
-.988	1.1050	.8709	.8878	.9405
-1.040	1.1168	.8858	.8906	.9421

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(aa) x/D = 7.0; y/D = 0.0; α = 0°;

p_∞ = 4856.84 N/m^2 (101.44 lb/ft^2);
q_∞ = 17 984.88 N/m^2 (375.62 lb/ft^2);
$p_{t,\infty}$ = 60 731.32 N/m^2 (1268.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0573	.8753	.9099	.9530
.988	1.0361	.8595	.9108	.9535
.936	1.0148	.8472	.9137	.9551
.884	1.0125	.8351	.9082	.9521
.832	1.0101	.8249	.9037	.9495
.780	1.0125	.8107	.8948	.9445
.728	1.0148	.7983	.8869	.9400
.676	1.0101	.7865	.8824	.9373
.624	1.0054	.7781	.8797	.9358
.572	1.0078	.7692	.8737	.9322
.520	1.0101	.7603	.8676	.9286
.468	1.0148	.7477	.8583	.9231
.416	1.0196	.7333	.8481	.9168
.364	1.0125	.7199	.8432	.9138
.312	1.0054	.7030	.8362	.9095
.260	1.0030	.6804	.8236	.9015
.208	1.0007	.6614	.8130	.8947
.156	1.0030	.6367	.7967	.8840
.104	1.0054	.6155	.7824	.8744
.052	1.0172	.5900	.7616	.8601
0.000	1.0290	.5715	.7452	.8485
-.104	1.0148	.5780	.7547	.8552
-.156	1.0125	.6029	.7717	.8671
-.208	1.0101	.6225	.7850	.8762
-.260	1.0101	.6559	.8058	.8900
-.312	1.0078	.6720	.8166	.8970
-.364	1.0078	.6913	.8283	.9045
-.416	1.0054	.7144	.8429	.9136
-.468	1.0054	.7319	.8532	.9200
-.520	1.0054	.7460	.8614	.9249
-.572	1.0078	.7581	.8673	.9285
-.624	1.0101	.7702	.8732	.9320
-.676	1.0148	.7786	.8759	.9336
-.728	1.0196	.7888	.8796	.9357
-.780	1.0148	.7997	.8877	.9404
-.832	1.0101	.8088	.8948	.9445
-.884	1.0125	.8209	.9004	.9477
-.936	1.0148	.8330	.9060	.9509
-.988	1.0243	.8446	.9081	.9520
-1.040	1.0337	.8561	.9101	.9531

(bb) x/D = 8.0; y/D = 0.0; α = 0°;

p_∞ = 4855.69 N/m^2 (101.41 lb/ft^2);
q_∞ = 17 980.63 N/m^2 (375.53 lb/ft^2);
$p_{t,\infty}$ = 60 716.96 N/m^2) (1268.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9831	.8620	.9364	.9675
.988	.9666	.8423	.9335	.9660
.936	.9500	.8314	.9355	.9670
.884	.9477	.8176	.9288	.9635
.832	.9453	.8073	.9241	.9609
.780	.9477	.7967	.9169	.9569
.728	.9500	.7843	.9086	.9523
.676	.9477	.7740	.9037	.9496
.624	.9453	.7654	.8999	.9474
.572	.9477	.7565	.8935	.9438
.520	.9500	.7476	.8871	.9401
.468	.9500	.7372	.8809	.9365
.416	.9500	.7232	.8725	.9315
.364	.9453	.7078	.8653	.9273
.312	.9406	.6942	.8591	.9235
.260	.9406	.6715	.8449	.9149
.208	.9406	.6558	.8350	.9087
.156	.9429	.6346	.8204	.8994
.104	.9453	.6151	.8067	.8906
.052	.9524	.5936	.7895	.8792
0.000	.9595	.5772	.7756	.8698
-.104	.9500	.5816	.7824	.8744
-.156	.9524	.5973	.7919	.8808
-.208	.9548	.6200	.8058	.8900
-.260	.9477	.6399	.8217	.9003
-.312	.9500	.6573	.8318	.9067
-.364	.9500	.6749	.8429	.9136
-.416	.9453	.6964	.8583	.9230
-.468	.9453	.7122	.8680	.9289
-.520	.9453	.7280	.8776	.9345
-.572	.9453	.7420	.8860	.9394
-.624	.9453	.7508	.8912	.9424
-.676	.9500	.7627	.8960	.9452
-.728	.9548	.7729	.8997	.9473
-.780	.9524	.7836	.9071	.9514
-.832	.9500	.7926	.9134	.9550
-.884	.9524	.8029	.9182	.9576
-.936	.9548	.8150	.9239	.9608
-.988	.9618	.8250	.9261	.9620
-1.040	.9689	.8350	.9283	.9632

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(cc) $x/D = 8.39$; $y/D = 3.0$; $\alpha = 0^o$;
$p_\infty = 4847.65$ N/m^2 (101.25 lb/ft^2);
$q_\infty = 17\ 950.85$ N/m^2 (374.91 lb/ft^2);
$p_{t,\infty} = 60\ 616.41$ N/m^2 (1266.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0371	1.0017	.9828	.9915
.988	1.0158	1.0033	.9938	.9970
.936	.9944	1.0031	1.0043	1.0021
.884	.9897	1.0034	1.0069	1.0033
.832	.9850	1.0038	1.0095	1.0046
.780	.9850	1.0038	1.0095	1.0046
.728	.9850	1.0021	1.0086	1.0042
.676	.9826	1.0022	1.0099	1.0048
.624	.9802	1.0024	1.0112	1.0054
.572	.9897	1.0017	1.0060	1.0029
.520	.9992	1.0010	1.0009	1.0004
.468	.9968	1.0012	1.0022	1.0011
.416	.9944	1.0031	1.0043	1.0021
.364	.9944	1.0031	1.0043	1.0021
.312	.9944	1.0031	1.0043	1.0021
.260	.9921	1.0033	1.0056	1.0027
.208	.9897	1.0034	1.0069	1.0033
.156	.9921	1.0033	1.0056	1.0027
.104	.9944	1.0031	1.0043	1.0021
.052	.9992	1.0027	1.0018	1.0009
0.000	1.0039	1.0024	.9992	.9996
-.104	.9850	.9986	1.0069	1.0033
-.156	.9944	.9979	1.0017	1.0008
-.208	1.0039	.9972	.9967	.9984
-.260	.9850	.9986	1.0069	1.0033
-.312	.9944	.9979	1.0017	1.0008
-.364	.9921	.9981	1.0030	1.0015
-.416	.9850	.9986	1.0069	1.0033
-.468	.9826	.9988	1.0082	1.0040
-.520	.9802	.9990	1.0095	1.0046
-.572	.9826	.9988	1.0082	1.0040
-.624	.9850	.9986	1.0069	1.0033
-.676	.9897	.9983	1.0043	1.0021
-.728	.9944	.9997	1.0026	1.0013
-.780	.9897	1.0000	1.0052	1.0025
-.832	.9850	1.0004	1.0078	1.0038
-.884	.9921	.9999	1.0039	1.0019
-.936	.9992	.9993	1.0001	1.0000
-.988	1.0063	.9988	.9963	.9982
-1.040	1.0134	1.0000	.9934	.9968

(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^o$;
$p_\infty = 4838.46$ N/m^2 (101.05 lb/ft^2);
$q_\infty = 17\ 916.82$ N/m^2 (374.20 lb/ft^2);
$p_{t,\infty} = 60\ 601.49$ N/m^2 (1263.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1608	1.0347	.9441	.9716
.988	1.1371	1.0383	.9555	.9776
.936	1.1135	1.0383	.9657	.9829
.884	1.1111	1.0367	.9660	.9830
.832	1.1087	1.0369	.9671	.9836
.780	1.1040	1.0355	.9685	.9843
.728	1.0992	1.0341	.9699	.9850
.676	1.0992	1.0324	.9691	.9846
.624	1.0992	1.0324	.9691	.9846
.572	1.1087	1.0299	.9638	.9819
.520	1.1182	1.0292	.9594	.9796
.468	1.1158	1.0294	.9605	.9802
.416	1.1135	1.0295	.9616	.9808
.364	1.1111	1.0262	.9610	.9805
.312	1.1087	1.0264	.9622	.9811
.260	1.1063	1.0266	.9633	.9816
.208	1.1040	1.0267	.9644	.9822
.156	1.1087	1.0246	.9613	.9806
.104	1.1135	1.0243	.9591	.9795
.052	1.1158	1.0258	.9588	.9793
0.000	1.1182	1.0257	.9577	.9788
-.104	1.1040	1.0199	.9612	.9806
-.156	1.1016	1.0201	.9623	.9811
-.208	1.0992	1.0238	.9651	.9826
-.260	1.0945	1.0241	.9673	.9837
-.312	1.0921	1.0261	.9693	.9847
-.364	1.0921	1.0261	.9693	.9847
-.416	1.0850	1.0284	.9735	.9869
-.468	1.0850	1.0301	.9744	.9873
-.520	1.0850	1.0301	.9744	.9873
-.572	1.0969	1.0310	.9695	.9848
-.624	1.1087	1.0301	.9639	.9820
-.676	1.1158	1.0313	.9614	.9807
-.728	1.1229	1.0308	.9581	.9790
-.780	1.1135	1.0333	.9633	.9817
-.832	1.1040	1.0340	.9678	.9839
-.884	1.1158	1.0348	.9630	.9815
-.936	1.1277	1.0375	.9592	.9795
-.988	1.1371	1.0367	.9548	.9773
-1.040	1.1466	1.0378	.9514	.9755

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^\circ$;

$p_\infty = 4841.91$ N/m^2 (101.13 lb/ft^2);
$q_\infty = 17\,929.58$ N/m^2 (374.47 lb/ft^2);
$p_{t,\infty} = 60\,544.59$ N/m^2 (1264.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1216	.9994	.9440	.9716
.988	1.0979	.9977	.9533	.9765
.936	1.0743	.9978	.9637	.9819
.884	1.0719	.9909	.9615	.9807
.832	1.0696	.9911	.9626	.9813
.780	1.0672	.9896	.9629	.9815
.728	1.0648	.9862	.9624	.9812
.676	1.0625	.9847	.9627	.9813
.624	1.0601	.9831	.9630	.9815
.572	1.0696	.9771	.9558	.9778
.520	1.0790	.9747	.9504	.9750
.468	1.0767	.9731	.9507	.9751
.416	1.0743	.9715	.9510	.9753
.364	1.0743	.9680	.9493	.9744
.312	1.0743	.9663	.9484	.9739
.260	1.0696	.9649	.9498	.9746
.208	1.0648	.9653	.9521	.9758
.156	1.0696	.9632	.9490	.9742
.104	1.0743	.9628	.9467	.9730
.052	1.0790	.9624	.9444	.9718
0.000	1.0838	.9621	.9422	.9706
-.104	1.0648	.9570	.9480	.9737
-.156	1.0648	.9588	.9489	.9742
-.208	1.0648	.9588	.9489	.9742
-.260	1.0554	.9595	.9535	.9766
-.312	1.0554	.9648	.9561	.9779
-.364	1.0554	.9665	.9570	.9784
-.416	1.0459	.9690	.9625	.9813
-.468	1.0459	.9725	.9643	.9822
-.520	1.0459	.9743	.9651	.9826
-.572	1.0577	.9734	.9593	.9796
-.624	1.0696	.9742	.9544	.9770
-.676	1.0767	.9790	.9536	.9766
-.728	1.0838	.9820	.9519	.9757
-.780	1.0767	.9860	.9570	.9784
-.832	1.0696	.9901	.9621	.9810
-.884	1.0814	.9927	.9581	.9790
-.936	1.0932	.9971	.9550	.9774
-.988	1.1027	.9981	.9514	.9755
-1.040	1.1121	1.0027	.9495	.9745

(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^\circ$;

$p_\infty = 4847.27$ N/m^2 (101.24 lb/ft^2);
$q_\infty = 17\,949.44$ N/m^2 (374.88 lb/ft^2);
$p_{t,\infty} = 60\,611.62$ N/m^2 (1265.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0736	.9372	.9343	.9664
.988	1.0523	.9319	.9410	.9700
.936	1.0310	.9265	.9479	.9737
.884	1.0310	.9195	.9444	.9718
.832	1.0310	.9125	.9408	.9699
.780	1.0310	.9055	.9372	.9679
.728	1.0310	.8950	.9317	.9650
.676	1.0287	.8882	.9292	.9637
.624	1.0263	.8797	.9258	.9618
.572	1.0310	.8741	.9207	.9590
.520	1.0358	.8667	.9148	.9557
.468	1.0358	.8615	.9120	.9542
.416	1.0358	.8510	.9064	.9511
.364	1.0334	.8459	.9048	.9501
.312	1.0310	.8426	.9040	.9497
.260	1.0287	.8375	.9023	.9488
.208	1.0263	.8360	.9025	.9489
.156	1.0310	.8304	.8974	.9460
.104	1.0358	.8283	.8942	.9442
.052	1.0358	.8248	.8923	.9431
0.000	1.0358	.8248	.8923	.9431
-.104	1.0216	.8168	.8942	.9441
-.156	1.0263	.8217	.8948	.9445
-.208	1.0310	.8231	.8935	.9438
-.260	1.0168	.8260	.9013	.9482
-.312	1.0216	.8309	.9018	.9485
-.364	1.0216	.8326	.9028	.9490
-.416	1.0121	.8439	.9131	.9548
-.468	1.0121	.8492	.9160	.9564
-.520	1.0121	.8544	.9188	.9580
-.572	1.0192	.8592	.9181	.9576
-.624	1.0263	.8692	.9203	.9588
-.676	1.0310	.8759	.9217	.9595
-.728	1.0358	.8843	.9240	.9608
-.780	1.0310	.8952	.9318	.9651
-.832	1.0263	.9026	.9378	.9683
-.884	1.0334	.9091	.9379	.9683
-.936	1.0405	.9155	.9380	.9684
-.988	1.0499	.9254	.9388	.9688
-1.040	1.0594	.9299	.9369	.9678

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^o$;

$p_\infty = 4845.35$ N/m^2 (101.20 lb/ft^2);
$q_\infty = 17\,942.35$ N/m^2 (374.73 lb/ft^2);
$p_{t,\infty} = 60\,587.68$ N/m^2 (1265.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0558	.9121	.9295	.9638
.988	1.0321	.9052	.9365	.9676
.936	1.0084	.8982	.9438	.9715
.884	1.0061	.8879	.9394	.9692
.832	1.0037	.8793	.9360	.9673
.780	1.0061	.8686	.9292	.9636
.728	1.0084	.8580	.9224	.9599
.676	1.0061	.8459	.9169	.9569
.624	1.0037	.8373	.9134	.9550
.572	1.0061	.8301	.9084	.9522
.520	1.0084	.8230	.9034	.9494
.468	1.0108	.8158	.8984	.9465
.416	1.0132	.8051	.8914	.9426
.364	1.0084	.7984	.8898	.9416
.312	1.0037	.7935	.8892	.9413
.260	1.0037	.7865	.8852	.9390
.208	1.0037	.7830	.8833	.9378
.156	1.0061	.7758	.8782	.9349
.104	1.0084	.7704	.8741	.9325
.052	1.0108	.7667	.8709	.9306
0.000	1.0132	.7648	.8688	.9294
-.104	.9990	.7626	.8737	.9323
-.156	1.0013	.7659	.8746	.9328
-.208	1.0037	.7693	.8755	.9333
-.260	.9966	.7751	.8819	.9371
-.312	.9990	.7784	.8827	.9375
-.364	.9990	.7855	.8867	.9399
-.416	.9942	.7946	.8940	.9440
-.468	.9942	.8017	.8980	.9463
-.520	.9942	.8087	.9019	.9485
-.572	.9990	.8136	.9025	.9489
-.624	1.0037	.8256	.9069	.9514
-.676	1.0084	.8322	.9084	.9522
-.728	1.0132	.8442	.9128	.9547
-.780	1.0084	.8533	.9199	.9586
-.832	1.0037	.8607	.9260	.9619
-.884	1.0108	.8725	.9291	.9636
-.936	1.0179	.8843	.9320	.9652
-.988	1.0250	.8925	.9331	.9658
-1.040	1.0321	.9025	.9351	.9668

(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^o$;

$p_\infty = 4838.46$ N/m^2 (101.05 lb/ft^2);
$q_\infty = 17\,916.82$ N/m^2 (374.20 lb/ft^2);
$p_{t,\infty} = 60\,501.49$ N/m^2 (1263.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0336	.8872	.9265	.9622
.988	1.0099	.8732	.9299	.9640
.936	.9862	.8645	.9363	.9675
.884	.9862	.8505	.9287	.9634
.832	.9862	.8400	.9229	.9602
.780	.9862	.8294	.9171	.9570
.728	.9862	.8154	.9093	.9527
.676	.9862	.8049	.9034	.9494
.624	.9862	.7979	.8995	.9472
.572	.9862	.7909	.8955	.9449
.520	.9862	.7821	.8905	.9421
.468	.9909	.7747	.8842	.9384
.416	.9956	.7621	.8749	.9329
.364	.9909	.7502	.8701	.9301
.312	.9862	.7382	.8652	.9272
.260	.9838	.7209	.8560	.9217
.208	.9814	.7088	.8498	.9179
.156	.9838	.6980	.8423	.9133
.104	.9862	.6803	.8306	.9059
.052	.9862	.6768	.8284	.9046
0.000	.9862	.6662	.8219	.9004
-.104	.9814	.6664	.8240	.9018
-.156	.9838	.6697	.8251	.9024
-.208	.9862	.6837	.8326	.9072
-.260	.9791	.6930	.8413	.9127
-.312	.9814	.7034	.8466	.9159
-.364	.9814	.7193	.8561	.9217
-.416	.9767	.7355	.8678	.9288
-.468	.9767	.7496	.8761	.9337
-.520	.9767	.7637	.8843	.9384
-.572	.9814	.7740	.8880	.9406
-.624	.9862	.7824	.8907	.9422
-.676	.9862	.7894	.8947	.9445
-.728	.9862	.8000	.9007	.9479
-.780	.9862	.8106	.9066	.9512
-.832	.9862	.8194	.9115	.9539
-.884	.9909	.8331	.9169	.9569
-.936	.9956	.8451	.9213	.9593
-.988	1.0028	.8569	.9244	.9610
-1.040	1.0099	.8686	.9274	.9627

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^o$;

$p_\infty = 4843.82$ N/m^2 (101.17 lb/ft^2);
$q_\infty = 17\,936.67$ N/m^2 (374.62 lb/ft^2);
$p_{t,\infty} = 60\,568.53$ N/m^2 (1265.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0036	.8674	.9297	.9639
.988	.9847	.8443	.9260	.9619
.936	.9657	.8317	.9280	.9630
.884	.9657	.8195	.9212	.9593
.832	.9657	.8090	.9153	.9560
.780	.9681	.7965	.9071	.9515
.728	.9705	.7841	.8989	.9468
.676	.9681	.7738	.8940	.9441
.624	.9657	.7634	.8891	.9412
.572	.9681	.7563	.8838	.9382
.520	.9705	.7491	.8786	.9351
.468	.9728	.7349	.8691	.9295
.416	.9752	.7171	.8575	.9226
.364	.9705	.7000	.8493	.9176
.312	.9657	.6775	.8376	.9103
.260	.9610	.6568	.8267	.9035
.208	.9563	.6361	.8156	.8964
.156	.9610	.6112	.7975	.8845
.104	.9657	.5985	.7872	.8777
.052	.9728	.5856	.7759	.8700
0.000	.9799	.5833	.7715	.8670
−.104	.9657	.5803	.7752	.8695
−.156	.9657	.5856	.7787	.8719
−.208	.9657	.5997	.7880	.8782
−.260	.9634	.6105	.7961	.8836
−.312	.9634	.6282	.8075	.8911
−.364	.9610	.6495	.8221	.9006
−.416	.9610	.6795	.8409	.9124
−.468	.9586	.7043	.8572	.9224
−.520	.9563	.7221	.8690	.9295
−.572	.9586	.7378	.8773	.9344
−.624	.9610	.7464	.8813	.9367
−.676	.9634	.7550	.8853	.9390
−.728	.9657	.7672	.8913	.9425
−.780	.9634	.7762	.8976	.9461
−.832	.9610	.7869	.9049	.9502
−.884	.9634	.7990	.9107	.9535
−.936	.9657	.8129	.9175	.9572
−.988	.9728	.8247	.9207	.9590
−1.040	.9799	.8382	.9249	.9613

(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^o$;

$p_\infty = 4842.29$ N/m^2 (101.13 lb/ft^2);
$q_\infty = 17\,931.00$ N/m^2 (374.50 lb/ft^2);
$p_{t,\infty} = 60\,549.37$ N/m^2 (1264.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9843	.8611	.9353	.9670
.988	.9654	.8380	.9317	.9650
.936	.9464	.8272	.9349	.9667
.884	.9464	.8150	.9280	.9630
.832	.9464	.8028	.9210	.9592
.780	.9464	.7905	.9139	.9553
.728	.9464	.7783	.9068	.9513
.676	.9441	.7644	.8999	.9474
.624	.9417	.7541	.8949	.9445
.572	.9441	.7417	.8864	.9396
.520	.9464	.7310	.8788	.9353
.468	.9488	.7168	.8692	.9296
.416	.9512	.6973	.8562	.9218
.364	.9464	.6767	.8456	.9153
.312	.9417	.6630	.8391	.9113
.260	.9393	.6369	.8234	.9014
.208	.9370	.6143	.8097	.8925
.156	.9393	.5983	.7981	.8849
.104	.9417	.5875	.7899	.8795
.052	.9488	.5712	.7759	.8700
0.000	.9559	.5636	.7678	.8644
−.104	.9464	.5608	.7698	.8658
−.156	.9464	.5679	.7746	.8691
−.208	.9464	.5838	.7854	.8764
−.260	.9464	.5962	.7937	.8820
−.312	.9464	.6121	.8042	.8889
−.364	.9441	.6334	.8191	.8986
−.416	.9464	.6632	.8371	.9100
−.468	.9441	.6846	.8515	.9189
−.520	.9417	.7041	.8647	.9269
−.572	.9441	.7198	.8732	.9319
−.624	.9464	.7337	.8805	.9362
−.676	.9488	.7476	.8877	.9404
−.728	.9512	.7650	.8968	.9457
−.780	.9488	.7740	.9032	.9493
−.832	.9464	.7865	.9116	.9540
−.884	.9488	.8004	.9185	.9578
−.936	.9512	.8125	.9243	.9610
−.988	.9583	.8190	.9245	.9611
−1.040	.9654	.8343	.9297	.9639

TABLE 2.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(kk) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 4843.44$ N/m^2 (101.16 lb/ft^2);
$q_\infty = 17\ 935.26$ N/m^2 (374.59 lb/ft^2);
$p_{t,\infty} = 60\ 563.74$ N/m^2 (1264.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9656	.8536	.9402	.9696
.988	.9490	.8321	.9364	.9675
.936	.9324	.8211	.9384	.9686
.884	.9301	.8090	.9327	.9655
.832	.9277	.8005	.9289	.9635
.780	.9301	.7898	.9215	.9595
.728	.9324	.7774	.9131	.9548
.676	.9301	.7671	.9081	.9520
.624	.9277	.7602	.9053	.9504
.572	.9301	.7496	.8977	.9462
.520	.9324	.7406	.8912	.9425
.468	.9324	.7301	.8849	.9388
.416	.9324	.7161	.8764	.9338
.364	.9301	.7005	.8679	.9288
.312	.9277	.6902	.8626	.9256
.260	.9253	.6659	.8483	.9170
.208	.9230	.6520	.8405	.9121
.156	.9253	.6343	.8279	.9043
.104	.9277	.6148	.8141	.8954
.052	.9324	.5952	.7989	.8855
0.000	.9372	.5807	.7872	.8776
-.104	.9277	.5798	.7906	.8799
-.156	.9324	.5936	.7979	.8848
-.208	.9372	.6162	.8108	.8933
-.260	.9277	.6328	.8259	.9030
-.312	.9324	.6483	.8338	.9080
-.364	.9324	.6677	.8462	.9157
-.416	.9277	.6909	.8630	.9259
-.468	.9277	.7050	.8718	.9311
-.520	.9277	.7209	.8815	.9368
-.572	.9277	.7350	.8901	.9418
-.624	.9277	.7455	.8964	.9454
-.676	.9301	.7541	.9005	.9477
-.728	.9324	.7645	.9055	.9506
-.780	.9324	.7733	.9107	.9535
-.832	.9324	.7874	.9189	.9580
-.884	.9324	.7962	.9240	.9608
-.936	.9324	.8067	.9301	.9642
-.988	.9395	.8167	.9324	.9654
-1.040	.9466	.8303	.9365	.9676

(ll) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^\circ$;

$p_\infty = 4842.29$ N/m^2 (101.13 lb/ft^2);
$q_\infty = 17\ 931.00$ N/m^2 (374.50 lb/ft^2);
$p_{t,\infty} = 60\ 549.37$ N/m^2 (1264.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9234	.8545	.9620	.9810
.988	.9044	.8314	.9588	.9793
.936	.8855	.8206	.9627	.9813
.884	.8831	.8103	.9579	.9788
.832	.8808	.7982	.9520	.9758
.780	.8855	.7856	.9419	.9705
.728	.8902	.7712	.9308	.9645
.676	.8879	.7539	.9215	.9594
.624	.8855	.7401	.9142	.9554
.572	.8879	.7241	.9031	.9492
.520	.8902	.7064	.8908	.9422
.468	.8902	.6889	.8797	.9358
.416	.8902	.6924	.8819	.9371
.364	.8879	.7153	.8976	.9461
.312	.8855	.7225	.9033	.9493
.260	.8855	.7155	.8989	.9469
.208	.8855	.7103	.8956	.9450
.156	.8855	.6980	.8878	.9405
.104	.8855	.6875	.8811	.9366
.052	.8879	.6610	.8628	.9258
0.000	.8902	.6450	.8512	.9187
-.104	.8808	.6613	.8665	.9280
-.156	.8926	.6780	.8715	.9310
-.208	.9044	.6929	.8753	.9332
-.260	.8855	.7014	.8900	.9418
-.312	.8973	.7075	.8880	.9406
-.364	.8950	.7130	.8926	.9432
-.416	.8902	.7046	.8896	.9415
-.468	.8879	.6836	.8775	.9345
-.520	.8855	.6820	.8776	.9346
-.572	.8879	.7012	.8887	.9410
-.624	.8902	.7204	.8996	.9472
-.676	.8902	.7380	.9105	.9534
-.728	.8902	.7556	.9213	.9593
-.780	.8902	.7697	.9298	.9640
-.832	.8902	.7855	.9393	.9691
-.884	.8926	.7959	.9443	.9717
-.936	.8950	.8080	.9502	.9748
-.988	.9021	.8180	.9523	.9759
-1.040	.9092	.8315	.9564	.9781

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 2481.24 N/m^2 (51.82 lb/ft^2);
q_∞ = 15 217.76 N/m^2 (317.83 lb/ft^2);
$p_{t,\infty}$ = 85 825.36 N/m^2 (1792.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9791	.6368	.8065	.9147
.988	.8591	.6009	.8364	.9301
.936	.7390	.5733	.8808	.9513
.884	.6928	.5423	.8848	.9531
.832	.6466	.5238	.9000	.9599
.780	.6097	.5048	.9099	.9643
.728	.5727	.4899	.9249	.9706
.676	.5542	.4743	.9250	.9707
.624	.5358	.4606	.9272	.9716
.572	.4619	.4494	.9865	.9950
.520	.3880	.4341	1.0578	1.0199
.468	.3556	.4149	1.0801	1.0270
.416	.3233	.4122	1.1291	1.0416
.364	.4018	.3594	.9457	.9792
.312	.4803	.1949	.6369	.8079
.260	.5219	.0606	.3406	.5151
.208	.5635	.0099	.1323	.2162
.156	.5727	.0012	.0452	.0749
.104	.5819	0.0000	0.0000	0.0000
.052	.5681	0.0000	0.0000	0.0000
0.000	.5542	.0004	.0271	.0449
-.104	.5727	.0015	.0509	.0843
-.156	.5635	.0030	.0725	.1198
-.208	.5542	.0044	.0894	.1473
-.260	.4803	.0393	.2862	.4440
-.312	.4711	.1292	.5237	.7140
-.364	.4988	.2984	.7735	.8966
-.416	.3880	.4026	1.0186	1.0067
-.468	.4157	.4138	.9977	.9992
-.520	.4434	.4312	.9861	.9949
-.572	.4572	.4533	.9957	.9984
-.624	.4711	.4671	.9958	.9985
-.676	.5219	.4794	.9584	.9843
-.728	.5727	.4896	.9246	.9705
-.780	.6097	.5066	.9115	.9650
-.832	.6466	.5235	.8998	.9599
-.884	.6836	.5488	.8960	.9582
-.936	.7205	.5761	.8942	.9574
-.988	.7944	.6018	.8704	.9465
-1.040	.8683	.6399	.8585	.9409

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 0^o$;

p_∞ = 2483.18 N/m^2 (51.86 lb/ft^2);
q_∞ = 15 229.65 N/m^2 (318.08 lb/ft^2);
$p_{t,\infty}$ = 85 892.39 N/m^2 (1793.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8215	.5849	.8438	.9337
.988	.7199	.5565	.8792	.9506
.936	.6184	.5383	.9330	.9740
.884	.5861	.5171	.9393	.9766
.832	.5538	.5021	.9521	.9818
.780	.5353	.4885	.9552	.9830
.728	.5169	.4790	.9627	.9859
.676	.5123	.4710	.9589	.9844
.624	.5077	.4671	.9592	.9846
.572	.4661	.4648	.9985	.9995
.520	.4246	.4583	1.0390	1.0137
.468	.4846	.4475	.9610	.9853
.416	.5446	.5004	.9586	.9843
.364	.7107	.5692	.8949	.9577
.312	.8769	.5989	.8264	.9250
.260	1.0061	.6096	.7784	.8994
.208	1.1353	.4571	.6345	.8061
.156	1.1814	.2397	.4504	.6418
.104	1.2276	.1319	.3278	.4989
.052	1.2230	.1249	.3196	.4883
0.000	1.2184	.1540	.3556	.5337
-.104	1.2184	.1239	.3189	.4874
-.156	1.1814	.1913	.4024	.5892
-.208	1.1445	.3882	.5824	.7652
-.260	.8815	.5974	.8232	.9234
-.312	.8445	.6011	.8437	.9337
-.364	.8076	.5614	.8337	.9287
-.416	.5446	.4573	.9164	.9670
-.468	.5077	.4445	.9357	.9751
-.520	.4707	.4502	.9780	.9918
-.572	.4615	.4568	.9949	.9981
-.624	.4523	.4634	1.0122	1.0044
-.676	.4800	.4663	.9857	.9947
-.728	.5077	.4754	.9678	.9879
-.780	.5307	.4848	.9557	.9832
-.832	.5538	.4982	.9485	.9803
-.884	.5630	.5143	.9558	.9832
-.936	.5723	.5346	.9665	.9874
-.988	.6276	.5549	.9402	.9770
-1.040	.6830	.5814	.9226	.9697

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 0^\circ$;
$p_\infty = 2484.01$ N/m^2 (51.88 lb/ft^2);
$q_\infty = 15\ 234.74$ N/m^2 (318.18 lb/ft^2);
$p_{t,\infty} = 85\ 921.12$ N/m^2 (1794.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7378	.5685	.8778	.9499
.988	.6548	.5474	.9143	.9662
.936	.5718	.5325	.9651	.9869
.884	.5580	.5167	.9623	.9858
.832	.5441	.5091	.9672	.9877
.780	.5349	.5012	.9680	.9880
.728	.5257	.4955	.9708	.9891
.676	.6271	.5692	.9527	.9820
.624	.7286	.5545	.8724	.9474
.572	.7240	.5382	.8622	.9426
.520	.7194	.5446	.8701	.9463
.468	.9130	.6225	.8257	.9247
.416	1.1067	.6468	.7645	.8914
.364	1.1713	.6583	.7497	.8828
.312	1.2358	.6595	.7305	.8712
.260	1.2404	.6283	.7117	.8594
.208	1.2451	.5434	.6606	.8250
.156	1.2451	.4128	.5758	.7597
.104	1.2451	.3314	.5159	.7068
.052	1.2451	.3062	.4959	.6878
0.000	1.2451	.3083	.4976	.6894
-.104	1.2451	.3344	.5183	.7090
-.156	1.2589	.3965	.5612	.7474
-.208	1.2727	.5206	.6396	.8098
-.260	1.1667	.6270	.7331	.8728
-.312	1.1805	.6553	.7451	.8800
-.364	.9914	.6638	.8183	.9208
-.416	1.0883	.6347	.7637	.8910
-.468	.8992	.5957	.8139	.9186
-.520	.7101	.5339	.8671	.9449
-.572	.7009	.5426	.8798	.9509
-.624	.6917	.5615	.9010	.9604
-.676	.6133	.4845	.8889	.9550
-.728	.5349	.4880	.9551	.9830
-.780	.5349	.4942	.9611	.9853
-.832	.5349	.5024	.9691	.9884
-.884	.5303	.5129	.9835	.9939
-.936	.5257	.5275	1.0018	1.0006
-.988	.5626	.5424	.9819	.9933
-1.040	.5995	.5635	.9695	.9886

(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^\circ$;
$p_\infty = 2484.57$ N/m^2 (51.89 lb/ft^2);
$q_\infty = 15\ 238.14$ N/m^2 (318.26 lb/ft^2);
$p_{t,\infty} = 85\ 940.28$ N/m^2 (1794.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1070	1.0054	.9530	.9821
.988	1.0424	1.0103	.9845	.9943
.936	.9778	1.0151	1.0189	1.0067
.884	.9778	1.0151	1.0189	1.0067
.832	.9778	1.0151	1.0189	1.0067
.780	.9778	1.0151	1.0189	1.0067
.728	.9778	1.0151	1.0189	1.0067
.676	.9732	1.0112	1.0193	1.0069
.624	.9686	1.0114	1.0219	1.0078
.572	.9824	1.0149	1.0164	1.0059
.520	.9963	1.0143	1.0090	1.0032
.468	.9917	1.0145	1.0115	1.0041
.416	.9871	1.0147	1.0139	1.0050
.364	.9871	1.0147	1.0139	1.0050
.312	.9871	1.0147	1.0139	1.0050
.260	.9824	1.0149	1.0164	1.0059
.208	.9778	1.0172	1.0199	1.0071
.156	.9824	1.0149	1.0164	1.0059
.104	.9871	1.0147	1.0139	1.0050
.052	.9917	1.0104	1.0094	1.0034
0.000	.9963	1.0102	1.0070	1.0025
-.104	.9778	1.0054	1.0140	1.0050
-.156	.9871	1.0071	1.0101	1.0036
-.208	.9963	1.0067	1.0052	1.0019
-.260	.9686	1.0079	1.0201	1.0072
-.312	.9778	1.0075	1.0150	1.0054
-.364	.9778	1.0054	1.0140	1.0050
-.416	.9594	1.0062	1.0241	1.0086
-.468	.9594	1.0062	1.0241	1.0086
-.520	.9594	1.0062	1.0241	1.0086
-.572	.9640	1.0039	1.0205	1.0073
-.624	.9686	1.0058	1.0190	1.0068
-.676	.9732	1.0056	1.0165	1.0059
-.728	.9778	1.0054	1.0140	1.0050
-.780	.9732	1.0056	1.0165	1.0059
-.832	.9686	1.0058	1.0190	1.0068
-.884	.9732	1.0056	1.0165	1.0059
-.936	.9778	1.0075	1.0150	1.0054
-.988	.9871	1.0050	1.0090	1.0033
-1.040	.9963	1.0046	1.0042	1.0015

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) x/D = 2.5; y/D = 2.0; $\alpha = 0^\circ$;

p_∞ = 2486.64 N/m^2 (51.93 lb/ft^2);
q_∞ = 15 250.87 N/m^2 (318.52 lb/ft^2);
$p_{t,\infty}$ = 86 012.10 N/m^2 (1796.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4655	1.1735	.8948	.9576
.988	1.3780	1.1629	.9187	.9680
.936	1.2904	1.1565	.9467	.9796
.884	1.2720	1.1470	.9496	.9808
.832	1.2535	1.1376	.9526	.9820
.780	1.2397	1.1279	.9539	.9825
.728	1.2259	1.1162	.9542	.9826
.676	1.2075	1.1068	.9574	.9839
.624	1.1890	1.0994	.9616	.9855
.572	1.2028	1.0906	.9522	.9818
.520	1.2167	1.0858	.9447	.9788
.468	1.2075	1.0780	.9449	.9789
.416	1.1982	1.0723	.9460	.9793
.364	1.1844	1.0667	.9490	.9805
.312	1.1706	1.0632	.9530	.9821
.260	1.1614	1.0575	.9542	.9826
.208	1.1521	1.0558	.9573	.9838
.156	1.1521	1.0517	.9554	.9831
.104	1.1521	1.0497	.9545	.9827
.052	1.1521	1.0497	.9545	.9827
0.000	1.1521	1.0497	.9545	.9827
-.104	1.1429	1.0447	.9560	.9833
-.156	1.1337	1.0492	.9620	.9857
-.208	1.1245	1.0558	.9690	.9884
-.260	1.1199	1.0560	.9710	.9892
-.312	1.1107	1.0626	.9781	.9919
-.364	1.1153	1.0644	.9769	.9914
-.416	1.0968	1.0714	.9883	.9957
-.468	1.1015	1.0794	.9900	.9963
-.520	1.1061	1.0875	.9916	.9969
-.572	1.1521	1.0917	.9734	.9901
-.624	1.1982	1.0979	.9572	.9838
-.676	1.2259	1.1070	.9503	.9810
-.728	1.2535	1.1161	.9436	.9784
-.780	1.2397	1.1291	.9543	.9827
-.832	1.2259	1.1359	.9626	.9859
-.884	1.2720	1.1483	.9501	.9810
-.936	1.3181	1.1628	.9392	.9766
-.988	1.3503	1.1737	.9323	.9737
-1.040	1.3826	1.1847	.9257	.9710

(f) x/D = 2.5; y/D = 1.5; $\alpha = 0^\circ$;

p_∞ = 2484.98 N/m^2 (51.90 lb/ft^2);
q_∞ = 15 240.69 N/m^2 (318.31 lb/ft^2);
$p_{t,\infty}$ = 85 954.64 N/m^2 (1795.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1255	.9426	.9152	.9665
.988	1.0333	.9302	.9488	.9805
.936	.9410	.9158	.9865	.9950
.884	.9225	.9001	.9878	.9955
.832	.9041	.8886	.9914	.9969
.780	.8903	.8749	.9913	.9968
.728	.8764	.8611	.9912	.9968
.676	.8580	.8516	.9963	.9986
.624	.8395	.8401	1.0004	1.0001
.572	.8349	.8321	.9983	.9994
.520	.8303	.8241	.9963	.9986
.468	.8118	.8167	1.0030	1.0011
.416	.7934	.8093	1.0100	1.0036
.364	.7888	.7992	1.0066	1.0024
.312	.7842	.7932	1.0058	1.0021
.260	.7796	.7893	1.0063	1.0023
.208	.7749	.7854	1.0067	1.0024
.156	.7703	.7815	1.0072	1.0026
.104	.7657	.7797	1.0091	1.0033
.052	.7657	.7776	1.0077	1.0028
0.000	.7657	.7776	1.0077	1.0028
-.104	.7565	.7713	1.0098	1.0035
-.156	.7749	.7747	.9998	.9999
-.208	.7934	.7759	.9889	.9959
-.260	.7796	.7786	.9994	.9998
-.312	.7980	.7860	.9925	.9972
-.364	.8026	.7900	.9921	.9971
-.416	.8026	.7982	.9972	.9990
-.468	.8072	.8062	.9994	.9998
-.520	.8118	.8122	1.0002	1.0001
-.572	.8257	.8240	.9990	.9996
-.624	.8395	.8337	.9965	.9987
-.676	.8534	.8455	.9954	.9983
-.728	.8672	.8593	.9954	.9983
-.780	.8810	.8732	.9955	.9984
-.832	.8949	.8849	.9944	.9980
-.884	.9225	.9023	.9890	.9959
-.936	.9502	.9196	.9838	.9940
-.988	.9825	.9306	.9732	.9900
-1.040	1.0148	.9478	.9664	.9874

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(g) $x/D = 2.5$; $y/D = 1.0$; $\alpha = 0^\circ$;

$p_\infty = 2486.50$ N/m^2 (51.93 lb/ft^2);
$q_\infty = 15\ 250.03$ N/m^2 (318.50 lb/ft^2);
$p_{t,\infty} = 86\ 007.31$ N/m^2 (1796.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8667	.7440	.9265	.9713
.988	.7883	.7228	.9576	.9839
.936	.7099	.7098	.9999	1.0000
.884	.6869	.6944	1.0054	1.0020
.832	.6638	.6790	1.0113	1.0041
.780	.6592	.6628	1.0027	1.0010
.728	.6546	.6465	.9938	.9977
.676	.6408	.6348	.9954	.9983
.624	.6269	.6231	.9970	.9989
.572	.6085	.6137	1.0042	1.0015
.520	.5901	.6042	1.0119	1.0043
.468	.5808	.5964	1.0133	1.0048
.416	.5716	.5886	1.0147	1.0053
.364	.5855	.5798	.9952	.9982
.312	.5993	.5751	.9796	.9924
.260	.6546	.5686	.9320	.9736
.208	.7099	.5600	.8882	.9546
.156	.6961	.5586	.8958	.9581
.104	.6823	.5571	.9036	.9615
.052	.6638	.5497	.9100	.9643
0.000	.6454	.5546	.9270	.9715
-.104	.6915	.5511	.8927	.9567
-.156	.7053	.5505	.8834	.9525
-.208	.7191	.5519	.8761	.9491
-.260	.7145	.5563	.8823	.9520
-.312	.7284	.5598	.8767	.9494
-.364	.6777	.5661	.9140	.9660
-.416	.7376	.5738	.8820	.9519
-.468	.6869	.5822	.9207	.9689
-.520	.6362	.5906	.9635	.9863
-.572	.6316	.6032	.9773	.9916
-.624	.6269	.6116	.9877	.9955
-.676	.6269	.6260	.9993	.9997
-.728	.6269	.6425	1.0123	1.0044
-.780	.6408	.6563	1.0121	1.0043
-.832	.6546	.6702	1.0118	1.0042
-.884	.6684	.6860	1.0131	1.0047
-.936	.6823	.7061	1.0173	1.0062
-.988	.7099	.7234	1.0094	1.0034
-1.040	.7376	.7408	1.0021	1.0008

(h) $x/D = 2.5$; $y/D = 0.83$; $\alpha = 0^\circ$;

$p_\infty = 2487.20$ N/m^2 (51.95 lb/ft^2);
$q_\infty = 15\ 254.27$ N/m^2 (318.59 lb/ft^2);
$p_{t,\infty} = 86\ 031.25$ N/m^2 (1796.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.8109	.6854	.9193	.9683
.988	.7326	.6662	.9536	.9824
.936	.6543	.6532	.9991	.9997
.884	.6358	.6334	.9981	.9993
.832	.6174	.6199	1.0020	1.0007
.780	.6128	.6036	.9925	.9973
.728	.6082	.5895	.9845	.9943
.676	.5990	.5796	.9837	.9940
.624	.5898	.5677	.9811	.9930
.572	.5713	.5603	.9903	.9964
.520	.5529	.5549	1.0018	1.0007
.468	.5391	.5473	1.0076	1.0027
.416	.5253	.5417	1.0156	1.0056
.364	.5299	.5395	1.0090	1.0033
.312	.5345	.5352	1.0007	1.0002
.260	.5437	.5327	.9899	.9963
.208	.5529	.5303	.9793	.9923
.156	.5483	.5284	.9817	.9932
.104	.5437	.5266	.9841	.9941
.052	.5483	.5202	.9741	.9903
0.000	.5529	.5241	.9736	.9902
-.104	.5529	.5239	.9734	.9901
-.156	.5667	.5233	.9609	.9853
-.208	.5806	.5227	.9489	.9805
-.260	.5990	.5240	.9353	.9750
-.312	.6128	.5254	.9260	.9711
-.364	.5944	.5283	.9428	.9780
-.416	.6451	.5322	.9084	.9636
-.468	.6266	.5372	.9259	.9711
-.520	.6082	.5442	.9459	.9793
-.572	.6174	.5520	.9455	.9791
-.624	.6266	.5598	.9452	.9790
-.676	.6082	.5709	.9689	.9883
-.728	.5898	.5861	.9969	.9989
-.780	.5990	.5960	.9975	.9991
-.832	.6082	.6101	1.0015	1.0006
-.884	.6174	.6303	1.0104	1.0037
-.936	.6266	.6484	1.0172	1.0062
-.988	.6543	.6637	1.0072	1.0026
-1.040	.6819	.6810	.9993	.9998

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞, WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^\circ$;

$p_\infty = 2488.30$ N/m^2 (51.97 lb/ft^2);
$q_\infty = 15\ 261.06$ N/m^2 (318.73 lb/ft^2);
$p_{t,\infty} = 86\ 069.55$ N/m^2 (1797.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7640	.6337	.9108	.9646
.988	.6857	.6166	.9483	.9802
.936	.6075	.6015	.9951	.9982
.884	.5937	.5837	.9915	.9969
.832	.5799	.5699	.9913	.9968
.780	.5799	.5596	.9824	.9935
.728	.5799	.5473	.9715	.9894
.676	.5799	.5391	.9642	.9865
.624	.5799	.5330	.9587	.9844
.572	.5661	.5295	.9671	.9877
.520	.5523	.5239	.9740	.9903
.468	.5615	.5215	.9637	.9863
.416	.5707	.5395	.9723	.9897
.364	.7732	.6477	.9152	.9666
.312	.9757	.6839	.8372	.9305
.260	1.0401	.6770	.8068	.9148
.208	1.1046	.6720	.7800	.9003
.156	1.1230	.6671	.7707	.8950
.104	1.1414	.6642	.7628	.8905
.052	1.1414	.6621	.7617	.8898
0.000	1.1414	.6621	.7617	.8898
-.104	1.1230	.6604	.7669	.8928
-.156	1.1138	.6629	.7715	.8955
-.208	1.1046	.6654	.7761	.8981
-.260	.8698	.6779	.8828	.9522
-.312	.8606	.6783	.8878	.9545
-.364	.8468	.6233	.8580	.9406
-.416	.6167	.5223	.9203	.9687
-.468	.6029	.5168	.9258	.9710
-.520	.5891	.5174	.9371	.9757
-.572	.5799	.5239	.9505	.9811
-.624	.5707	.5264	.9604	.9851
-.676	.5661	.5348	.9720	.9895
-.728	.5615	.5432	.9836	.9940
-.780	.5661	.5533	.9887	.9958
-.832	.5707	.5634	.9936	.9977
-.884	.5707	.5778	1.0062	1.0022
-.936	.5707	.5963	1.0222	1.0079
-.988	.5937	.6097	1.0134	1.0048
-1.040	.6167	.6293	1.0101	1.0036

(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^\circ$;

$p_\infty = 2487.89$ N/m^2 (51.96 lb/ft^2);
$q_\infty = 15\ 258.52$ N/m^2 (318.68 lb/ft^2);
$p_{t,\infty} = 86\ 055.19$ N/m^2 (1797.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7275	.5998	.9080	.9634
.988	.6584	.5823	.9404	.9771
.936	.5893	.5709	.9843	.9942
.884	.5755	.5551	.9821	.9934
.832	.5617	.5475	.9873	.9953
.780	.5663	.5391	.9757	.9910
.728	.5709	.5307	.9642	.9865
.676	.5847	.5240	.9466	.9796
.624	.5985	.5500	.9586	.9844
.572	.8748	.6917	.8892	.9551
.520	1.1510	.6774	.7671	.8930
.468	1.1556	.6690	.7608	.8893
.416	1.1602	.6605	.7545	.8857
.364	1.1556	.6566	.7538	.8852
.312	1.1510	.6527	.7530	.8848
.260	1.1418	.6470	.7527	.8846
.208	1.1326	.6412	.7524	.8844
.156	1.1372	.6308	.7447	.8799
.104	1.1418	.6203	.7370	.8752
.052	1.1372	.6122	.7337	.8732
0.000	1.1326	.6125	.7354	.8742
-.104	1.1234	.6192	.7424	.8785
-.156	1.1326	.6271	.7441	.8795
-.208	1.1418	.6349	.7457	.8804
-.260	1.1188	.6421	.7576	.8875
-.312	1.1280	.6458	.7567	.8869
-.364	1.1050	.6510	.7675	.8932
-.416	1.1142	.6547	.7665	.8926
-.468	1.0912	.6640	.7801	.9003
-.520	1.0682	.6733	.7939	.9079
-.572	.8287	.5995	.8505	.9370
-.624	.5893	.5174	.9370	.9757
-.676	.5801	.5178	.9447	.9788
-.728	.5709	.5244	.9584	.9843
-.780	.5663	.5307	.9681	.9880
-.832	.5617	.5371	.9779	.9918
-.884	.5479	.5500	1.0020	1.0007
-.936	.5341	.5650	1.0286	1.0101
-.988	.5617	.5782	1.0146	1.0052
-1.040	.5893	.5935	1.0035	1.0013

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(k) $x/D = 2.5$; $y/D = 0.21$; $\alpha = 0^\circ$;

$p_\infty = 2487.06$ N/m^2 (51.94 lb/ft^2);
$q_\infty = 15\,253.42$ N/m^2 (318.57 lb/ft^2);
$p_{t,\infty} = 86\,026.46$ N/m^2 (1796.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7190	.5798	.8980	.9590
.988	.6452	.5645	.9354	.9750
.936	.5715	.5554	.9858	.9948
.884	.5715	.5431	.9749	.9906
.832	.5715	.5349	.9675	.9878
.780	.5761	.5306	.9597	.9848
.728	.5807	.5612	.9830	.9937
.676	.8296	.6836	.9078	.9633
.624	1.0785	.6665	.7861	.9036
.572	1.1154	.6607	.7696	.8944
.520	1.1522	.6528	.7527	.8846
.468	1.1568	.6485	.7487	.8822
.416	1.1614	.6422	.7436	.8792
.364	1.1522	.6385	.7444	.8796
.312	1.1430	.6286	.7416	.8780
.260	1.1200	.5926	.7274	.8693
.208	1.0969	.5320	.6964	.8495
.156	1.1015	.4555	.6430	.8124
.104	1.1061	.3871	.5916	.7727
.052	1.1061	.3435	.5573	.7440
0.000	1.1061	.3311	.5471	.7351
-.104	1.0785	.3816	.5948	.7753
-.156	1.0969	.4388	.6325	.8045
-.208	1.1154	.5207	.6832	.8407
-.260	1.1061	.5851	.7273	.8692
-.312	1.1246	.6193	.7421	.8783
-.364	1.1107	.6344	.7557	.8864
-.416	1.1338	.6375	.7498	.8829
-.468	1.1200	.6422	.7573	.8873
-.520	1.1061	.6490	.7660	.8923
-.572	1.0969	.6536	.7719	.8957
-.624	1.0877	.6602	.7791	.8997
-.676	.8388	.6609	.8877	.9544
-.728	.5899	.5195	.9384	.9763
-.780	.5807	.5241	.9500	.9809
-.832	.5715	.5286	.9617	.9856
-.884	.5485	.5378	.9902	.9964
-.936	.5254	.5511	1.0242	1.0086
-.988	.5485	.5604	1.0109	1.0039
-1.040	.5715	.5738	1.0020	1.0007

(l) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 2488.86$ N/m^2 (51.98 lb/ft^2);
$q_\infty = 15\,264.46$ N/m^2 (318.80 lb/ft^2);
$p_{t,\infty} = 86\,088.70$ N/m^2 (1798.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7183	.5752	.8949	.9577
.988	.6446	.5579	.9303	.9729
.936	.5710	.5509	.9823	.9934
.884	.6677	.6245	.9672	.9877
.832	.7643	.5957	.8828	.9522
.780	.7367	.5744	.8830	.9523
.728	.7091	.5572	.8864	.9539
.676	.8564	.6327	.8595	.9413
.624	1.0038	.6651	.8140	.9186
.572	1.0821	.6678	.7856	.9034
.520	1.1603	.6622	.7554	.8862
.468	1.1557	.6562	.7535	.8851
.416	1.1511	.6503	.7516	.8839
.364	1.1511	.6421	.7468	.8811
.312	1.1511	.6236	.7360	.8746
.260	1.1327	.5812	.7163	.8624
.208	1.1143	.5204	.6834	.8408
.156	1.1189	.4439	.6299	.8026
.104	1.1235	.3941	.5923	.7733
.052	1.1327	.3709	.5722	.7568
0.000	1.1419	.3622	.5632	.7491
-.104	1.1235	.4024	.5985	.7782
-.156	1.1327	.4372	.6213	.7961
-.208	1.1419	.5072	.6664	.8291
-.260	1.1327	.5779	.7143	.8610
-.312	1.1419	.6167	.7349	.8739
-.364	1.1327	.6357	.7491	.8825
-.416	1.1419	.6435	.7507	.8834
-.468	1.1327	.6501	.7576	.8875
-.520	1.1235	.6567	.7645	.8915
-.572	1.0498	.6600	.7929	.9074
-.624	.9762	.6448	.8127	.9180
-.676	.8426	.5539	.8108	.9169
-.728	.7091	.5577	.8869	.9541
-.780	.7367	.5730	.8819	.9518
-.832	.7643	.5944	.8819	.9518
-.884	.6492	.5933	.9559	.9833
-.936	.5341	.5427	1.0080	1.0029
-.988	.5479	.5524	1.0041	1.0015
-1.040	.5617	.5662	1.0040	1.0014

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(m) $x/D = 2.5$; $y/D = -0.42$; $\alpha = 0^\circ$;

$p_\infty = 2489.69$ N/m^2 (52.00 lb/ft^2);
$q_\infty = 15\ 269.55$ N/m^2 (318.91 lb/ft^2);
$p_{t,\infty} = 86\ 117.43$ N/m^2 (1798.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9108	.6670	.8558	.9396
.988	.8050	.6347	.8880	.9546
.936	.6992	.6066	.9314	.9734
.884	.6624	.5754	.9320	.9736
.832	.6256	.5524	.9397	.9768
.780	.5980	.5352	.9461	.9793
.728	.5704	.5262	.9605	.9851
.676	.5658	.5161	.9551	.9830
.624	.5612	.4999	.9439	.9785
.572	.5014	.4800	.9784	.9920
.520	.4416	.4580	1.0184	1.0066
.468	.7912	.6661	.9175	.9675
.416	1.1407	.6341	.7456	.8803
.364	1.1361	.6137	.7350	.8740
.312	1.1315	.6222	.7415	.8779
.260	1.1315	.6324	.7476	.8816
.208	1.1315	.6283	.7452	.8801
.156	1.1361	.6179	.7374	.8755
.104	1.1407	.6115	.7322	.8722
.052	1.1407	.5601	.7007	.8523
0.000	1.1407	.4943	.6582	.8233
−.104	1.1315	.6046	.7309	.8715
−.156	1.1453	.6122	.7311	.8716
−.208	1.1591	.6177	.7300	.8709
−.260	1.1177	.6279	.7495	.8827
−.312	1.1315	.6231	.7421	.8783
−.364	.8418	.6217	.8594	.9413
−.416	1.1039	.6306	.7558	.8864
−.468	.8142	.5096	.7912	.9064
−.520	.5244	.4545	.9310	.9732
−.572	.5106	.4798	.9694	.9885
−.624	.4968	.5009	1.0042	1.0015
−.676	.5382	.5156	.9788	.9921
−.728	.5796	.5220	.9491	.9806
−.780	.5980	.5315	.9428	.9780
−.832	.6164	.5554	.9493	.9806
−.884	.6394	.5791	.9517	.9816
−.936	.6624	.6090	.9588	.9844
−.988	.7268	.6370	.9362	.9753
−1.040	.7912	.6692	.9197	.9684

(n) $x/D = 3.0$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 2490.66$ N/m^2 (52.02 lb/ft^2);
$q_\infty = 15\ 275.49$ N/m^2 (319.04 lb/ft^2);
$p_{t,\infty} = 86\ 150.95$ N/m^2 (1799.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9012	.6616	.8568	.9401
.988	.8092	.6328	.8843	.9529
.936	.7173	.6123	.9239	.9702
.884	.8506	.6433	.8697	.9461
.832	.9840	.7113	.8502	.9369
.780	1.0253	.6992	.8258	.9247
.728	1.0667	.6809	.7989	.9106
.676	1.0667	.6665	.7905	.9060
.624	1.0667	.6583	.7856	.9034
.572	1.0713	.6499	.7789	.8996
.520	1.0759	.6415	.7722	.8958
.468	1.0667	.6337	.7707	.8950
.416	1.0575	.6238	.7680	.8935
.364	1.0483	.6119	.7640	.8912
.312	1.0391	.5959	.7573	.8873
.260	1.0253	.5534	.7347	.8737
.208	1.0116	.5108	.7106	.8587
.156	1.0116	.4532	.6694	.8311
.104	1.0116	.4203	.6446	.8135
.052	1.0253	.3990	.6238	.7980
0.000	1.0391	.3900	.6127	.7894
−.104	1.0116	.4260	.6489	.8166
−.156	1.0253	.4522	.6641	.8275
−.208	1.0391	.4970	.6916	.8463
−.260	1.0345	.5509	.7297	.8707
−.312	1.0483	.5812	.7446	.8797
−.364	1.0483	.6080	.7615	.8897
−.416	1.0575	.6199	.7656	.8921
−.468	1.0575	.6281	.7707	.8950
−.520	1.0575	.6364	.7757	.8979
−.572	1.0667	.6463	.7784	.8993
−.624	1.0759	.6541	.7797	.9001
−.676	1.0759	.6665	.7870	.9042
−.728	1.0759	.6788	.7943	.9081
−.780	.9932	.6928	.8352	.9295
−.832	.9104	.6965	.8746	.9485
−.884	.8000	.5902	.8589	.9411
−.936	.6897	.6115	.9416	.9776
−.988	.7311	.6323	.9300	.9728
−1.040	.7725	.6593	.9239	.9702

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(o) $x/D = 4.0$; $y/D = 0.0$; $\alpha = 0^\circ$;

p_∞ = 2488.16 N/m^2 (51.97 lb/ft^2);
q_∞ = 15 260.21 N/m^2 (318.72 lb/ft^2);
$p_{t,\infty}$ = 86 064.76 N/m^2 (1797.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1320	.7641	.8216	.9226
.988	1.0583	.7387	.8354	.9296
.936	.9847	.7153	.8523	.9379
.884	.9755	.6890	.8404	.9321
.832	.9663	.6730	.8345	.9291
.780	.9617	.6568	.8264	.9250
.728	.9571	.6426	.8194	.9214
.676	.9525	.6305	.8136	.9184
.624	.9479	.6225	.8104	.9167
.572	.9525	.6162	.8043	.9135
.520	.9571	.6098	.7982	.9102
.468	.9525	.6038	.7962	.9092
.416	.9479	.5958	.7928	.9073
.364	.9433	.5796	.7839	.9024
.312	.9387	.5593	.7719	.8957
.260	.9341	.5267	.7509	.8835
.208	.9295	.4981	.7320	.8721
.156	.9295	.4631	.7059	.8557
.104	.9295	.4385	.6868	.8431
.052	.9295	.4220	.6738	.8342
0.000	.9295	.4138	.6672	.8296
-.104	.9203	.4452	.6955	.8489
-.156	.9295	.4633	.7060	.8558
-.208	.9387	.4960	.7269	.8690
-.260	.9341	.5313	.7541	.8854
-.312	.9433	.5577	.7689	.8940
-.364	.9433	.5783	.7830	.9019
-.416	.9479	.5904	.7892	.9054
-.468	.9479	.5987	.7947	.9084
-.520	.9479	.6069	.8002	.9113
-.572	.9479	.6131	.8042	.9135
-.624	.9479	.6214	.8096	.9163
-.676	.9525	.6315	.8142	.9187
-.728	.9571	.6436	.8200	.9218
-.780	.9617	.6558	.8258	.9247
-.832	.9663	.6741	.8352	.9295
-.884	.9801	.6921	.8403	.9320
-.936	.9939	.7162	.8489	.9362
-.988	1.0123	.7380	.8538	.9386
-1.040	1.0307	.7640	.8609	.9420

(p) $x/D = 5.0$; $y/D = 3.0$; $\alpha = 0^\circ$;

p_∞ = 2484.57 N/m^2 (51.89 lb/ft^2);
q_∞ = 15 238.14 N/m^2 (318.26 lb/ft^2);
$p_{t,\infty}$ = 85 940.28 N/m^2 (1794.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2727	1.0867	.9240	.9703
.988	1.2036	1.0877	.9506	.9812
.936	1.1344	1.0845	.9778	.9917
.884	1.1206	1.0810	.9822	.9934
.832	1.1067	1.0796	.9877	.9955
.780	1.1021	1.0757	.9879	.9956
.728	1.0975	1.0738	.9891	.9960
.676	1.0883	1.0701	.9916	.9969
.624	1.0791	1.0664	.9941	.9978
.572	1.0929	1.0637	.9866	.9951
.520	1.1067	1.0631	.9801	.9926
.468	1.1021	1.0613	.9813	.9931
.416	1.0975	1.0615	.9835	.9939
.364	1.0929	1.0576	.9837	.9940
.312	1.0883	1.0557	.9849	.9944
.260	1.0883	1.0557	.9849	.9944
.208	1.0883	1.0557	.9849	.9944
.156	1.0883	1.0537	.9840	.9941
.104	1.0883	1.0537	.9840	.9941
.052	1.0929	1.0535	.9818	.9933
0.000	1.0975	1.0533	.9796	.9925
-.104	1.0883	1.0503	.9824	.9935
-.156	1.0837	1.0526	.9856	.9947
-.208	1.0791	1.0590	.9907	.9966
-.260	1.0698	1.0594	.9951	.9982
-.312	1.0652	1.0596	.9973	.9990
-.364	1.0698	1.0594	.9951	.9982
-.416	1.0514	1.0622	1.0051	1.0019
-.468	1.0560	1.0620	1.0029	1.0010
-.520	1.0606	1.0660	1.0025	1.0009
-.572	1.0837	1.0670	.9923	.9972
-.624	1.1067	1.0702	.9833	.9939
-.676	1.1206	1.0737	.9789	.9922
-.728	1.1344	1.0772	.9745	.9905
-.780	1.1206	1.0799	.9817	.9932
-.832	1.1067	1.0825	.9890	.9960
-.884	1.1298	1.0877	.9812	.9930
-.936	1.1528	1.0929	.9737	.9902
-.988	1.1713	1.0942	.9665	.9874
-1.040	1.1897	1.0975	.9605	.9851

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^o$;

p_∞ = 2483.74 N/m2 (51.87 lb/ft2);
q_∞ = 15 233.05 N/m2 (318.15 lb/ft2);
$p_{t,\infty}$ = 85 911.55 N/m2 (1794.30 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9047	.8668	.9788	.9922
.988	.8401	.8634	1.0138	1.0049
.936	.7755	.8621	1.0544	1.0188
.884	.7662	.8564	1.0572	1.0197
.832	.7570	.8526	1.0613	1.0210
.780	.7570	.8506	1.0600	1.0206
.728	.7570	.8444	1.0562	1.0194
.676	.7478	.8428	1.0616	1.0211
.624	.7385	.8391	1.0659	1.0225
.572	.7339	.8372	1.0680	1.0232
.520	.7293	.8333	1.0689	1.0235
.468	.7201	.8337	1.0760	1.0257
.416	.7108	.8300	1.0806	1.0271
.364	.7108	.8279	1.0792	1.0267
.312	.7108	.8259	1.0779	1.0263
.260	.7155	.8236	1.0729	1.0247
.208	.7201	.8234	1.0694	1.0236
.156	.7155	.8236	1.0729	1.0247
.104	.7108	.8238	1.0765	1.0259
.052	.7155	.8195	1.0702	1.0239
0.000	.7201	.8214	1.0680	1.0232
-.104	.7108	.8143	1.0703	1.0239
-.156	.7247	.8158	1.0610	1.0209
-.208	.7385	.8152	1.0506	1.0175
-.260	.7247	.8178	1.0623	1.0214
-.312	.7385	.8173	1.0519	1.0180
-.364	.7385	.8193	1.0533	1.0184
-.416	.7385	.8214	1.0546	1.0188
-.468	.7385	.8276	1.0585	1.0201
-.520	.7385	.8337	1.0625	1.0214
-.572	.7385	.8358	1.0638	1.0218
-.624	.7385	.8399	1.0664	1.0227
-.676	.7385	.8420	1.0677	1.0231
-.728	.7385	.8461	1.0703	1.0239
-.780	.7478	.8478	1.0648	1.0221
-.832	.7570	.8515	1.0606	1.0208
-.884	.7662	.8573	1.0577	1.0199
-.936	.7755	.8631	1.0550	1.0190
-.988	.7893	.8645	1.0466	1.0162
-1.040	.8032	.8701	1.0408	1.0143

(r) $x/D = 5.0$; $y/D = 1.5$; $\alpha = 0^o$;

p_∞ = 2482.77 N/m2 (51.85 lb/ft2);
q_∞ = 15 227.10 N/m2 (318.02 lb/ft2);
$p_{t,\infty}$ = 85 878.03 N/m2 (1793.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7944	.7814	.9918	.9970
.988	.7344	.7799	1.0305	1.0108
.936	.6743	.7784	1.0744	1.0252
.884	.6651	.7747	1.0792	1.0267
.832	.6559	.7710	1.0842	1.0283
.780	.6651	.7685	1.0749	1.0254
.728	.6743	.7743	1.0715	1.0243
.676	.7713	.9160	1.0897	1.0300
.624	.8683	.9632	1.0532	1.0184
.572	.9561	.9573	1.0007	1.0002
.520	1.0438	.9494	.9537	.9824
.468	1.0392	.9435	.9528	.9821
.416	1.0346	.9416	.9540	.9825
.364	1.0300	.9356	.9531	.9822
.312	1.0254	.9338	.9543	.9826
.260	1.0207	.9319	.9555	.9831
.208	1.0161	.9280	.9557	.9832
.156	1.0207	.9278	.9534	.9823
.104	1.0254	.9256	.9501	.9810
.052	1.0300	.9233	.9468	.9796
0.000	1.0346	.9231	.9446	.9788
-.104	1.0161	.9189	.9510	.9813
-.156	1.0161	.9189	.9510	.9813
-.208	1.0161	.9210	.9520	.9817
-.260	1.0161	.9230	.9531	.9822
-.312	1.0161	.9292	.9563	.9834
-.364	1.0115	.9294	.9586	.9843
-.416	1.0161	.9375	.9605	.9851
-.468	1.0115	.9418	.9649	.9868
-.520	1.0069	.9461	.9693	.9885
-.572	.9746	.9496	.9871	.9953
-.624	.9422	.9572	1.0079	1.0028
-.676	.7990	.8108	1.0073	1.0026
-.728	.6559	.7633	1.0788	1.0266
-.780	.6559	.7633	1.0788	1.0266
-.832	.6559	.7675	1.0817	1.0275
-.884	.6605	.7714	1.0807	1.0272
-.936	.6651	.7774	1.0811	1.0273
-.988	.6743	.7811	1.0762	1.0258
-1.040	.6836	.7848	1.0715	1.0243

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^o$;

$p_\infty = 2483.18$ N/m^2 (51.86 lb/ft^2);
$q_\infty = 15\ 229.65$ N/m^2 (318.08 lb/ft^2);
$p_{t,\infty} = 85\ 892.39$ N/m^2 (1793.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1366	.8959	.8878	.9545
.988	1.0673	.8845	.9104	.9645
.936	.9979	.8773	.9376	.9759
.884	.9933	.8631	.9321	.9737
.832	.9887	.8530	.9288	.9723
.780	.9795	.8411	.9267	.9714
.728	.9702	.8271	.9233	.9700
.676	.9702	.8127	.9152	.9665
.624	.9702	.7983	.9071	.9630
.572	.9748	.7899	.9001	.9600
.520	.9795	.7773	.8909	.9559
.468	.9748	.7693	.8884	.9547
.416	.9702	.7592	.8846	.9530
.364	.9702	.7490	.8786	.9503
.312	.9702	.7407	.8738	.9481
.260	.9656	.7348	.8723	.9474
.208	.9610	.7309	.8721	.9473
.156	.9656	.7245	.8662	.9445
.104	.9702	.7202	.8616	.9423
.052	.9702	.7181	.8603	.9417
0.000	.9702	.7181	.8603	.9417
-.104	.9610	.7161	.8632	.9431
-.156	.9656	.7200	.8635	.9433
-.208	.9702	.7239	.8638	.9434
-.260	.9610	.7285	.8707	.9466
-.312	.9656	.7344	.8721	.9473
-.364	.9656	.7427	.8770	.9496
-.416	.9610	.7511	.8841	.9528
-.468	.9610	.7635	.8913	.9561
-.520	.9610	.7717	.8961	.9582
-.572	.9702	.7837	.8987	.9594
-.624	.9795	.7957	.9013	.9605
-.676	.9841	.8078	.9060	.9626
-.728	.9887	.8241	.9130	.9656
-.780	.9841	.8367	.9221	.9694
-.832	.9795	.8492	.9311	.9733
-.884	.9933	.8610	.9310	.9732
-.936	1.0072	.8769	.9331	.9740
-.988	1.0211	.8886	.9329	.9740
-1.040	1.0349	.8983	.9317	.9735

(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^o$;

$p_\infty = 2483.87$ N/m^2 (51.88 lb/ft^2);
$q_\infty = 15\ 233.90$ N/m^2 (318.17 lb/ft^2);
$p_{t,\infty} = 85\ 916.33$ N/m^2 (1794.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1260	.8600	.8740	.9482
.988	1.0567	.8466	.8951	.9578
.936	.9875	.8333	.9186	.9680
.884	.9783	.8152	.9128	.9655
.832	.9691	.7992	.9081	.9635
.780	.9644	.7809	.8998	.9599
.728	.9598	.7626	.8914	.9561
.676	.9552	.7485	.8852	.9533
.624	.9506	.7343	.8789	.9504
.572	.9598	.7195	.8658	.9443
.520	.9691	.7088	.8553	.9393
.468	.9598	.6949	.8508	.9372
.416	.9506	.6871	.8502	.9368
.364	.9506	.6768	.8438	.9337
.312	.9506	.6706	.8399	.9318
.260	.9506	.6645	.8361	.9299
.208	.9506	.6583	.8322	.9279
.156	.9506	.6542	.8296	.9266
.104	.9506	.6521	.8283	.9260
.052	.9552	.6499	.8248	.9242
0.000	.9598	.6497	.8227	.9231
-.104	.9506	.6498	.8268	.9252
-.156	.9598	.6515	.8239	.9237
-.208	.9691	.6552	.8223	.9229
-.260	.9506	.6581	.8320	.9279
-.312	.9598	.6659	.8329	.9283
-.364	.9598	.6680	.8342	.9290
-.416	.9506	.6787	.8450	.9343
-.468	.9506	.6891	.8514	.9374
-.520	.9506	.7015	.8590	.9411
-.572	.9552	.7136	.8643	.9437
-.624	.9598	.7279	.8708	.9467
-.676	.9644	.7442	.8784	.9502
-.728	.9691	.7626	.8871	.9542
-.780	.9691	.7770	.8955	.9579
-.832	.9691	.7935	.9049	.9621
-.884	.9829	.8095	.9075	.9632
-.936	.9967	.8295	.9122	.9653
-.988	1.0060	.8435	.9157	.9668
-1.040	1.0152	.8576	.9191	.9682

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^3 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(u) $x/D = 5.0$; $y/D = 0.63$; $\alpha = 0^o$;

$p_\infty = 2482.21$ N/m2 (51.84 lb/ft2);
$q_\infty = 15\ 223.71$ N/m2 (317.95 lb/ft2);
$p_{t,\infty} = 85\ 858.88$ N/m2 (1793.20 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1082	.8059	.8528	.9381
.988	1.0390	.7884	.8711	.9468
.936	.9697	.7709	.8916	.9562
.884	.9605	.7508	.8841	.9528
.832	.9512	.7327	.8777	.9499
.780	.9466	.7124	.8675	.9451
.728	.9420	.6920	.8571	.9402
.676	.9374	.6778	.8504	.9370
.624	.9328	.6637	.8435	.9336
.572	.9420	.6530	.8326	.9281
.520	.9512	.6423	.8217	.9226
.468	.9466	.6343	.8186	.9210
.416	.9420	.6283	.8167	.9200
.364	.9420	.6201	.8113	.9172
.312	.9420	.6139	.8073	.9151
.260	.9374	.6080	.8053	.9141
.208	.9328	.6040	.8047	.9137
.156	.9374	.5977	.7985	.9104
.104	.9420	.5933	.7936	.9078
.052	.9420	.5913	.7923	.9070
0.000	.9420	.5913	.7923	.9070
-.104	.9328	.5904	.7956	.9088
-.156	.9420	.5962	.7955	.9088
-.208	.9512	.5999	.7941	.9080
-.260	.9374	.6047	.8031	.9129
-.312	.9466	.6104	.8030	.9128
-.364	.9420	.6148	.8079	.9154
-.416	.9420	.6210	.8119	.9175
-.468	.9374	.6294	.8194	.9215
-.520	.9328	.6379	.8270	.9253
-.572	.9374	.6480	.8315	.9276
-.624	.9420	.6602	.8372	.9305
-.676	.9466	.6745	.8441	.9339
-.728	.9512	.6928	.8534	.9384
-.780	.9512	.7073	.8623	.9427
-.832	.9512	.7259	.8735	.9480
-.884	.9605	.7482	.8826	.9521
-.936	.9697	.7704	.8914	.9561
-.988	.9836	.7884	.8953	.9579
-1.040	.9974	.8084	.9003	.9601

(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^o$;

$p_\infty = 2481.94$ N/m2 (51.84 lb/ft2);
$q_\infty = 15\ 222.01$ N/m2 (317.92 lb/ft2);
$p_{t,\infty} = 85\ 849.30$ N/m2 (1793.00 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0814	.7587	.8376	.9307
.988	1.0121	.7371	.8534	.9384
.936	.9428	.7196	.8736	.9480
.884	.9428	.6969	.8598	.9415
.832	.9428	.6784	.8483	.9359
.780	.9381	.6642	.8414	.9326
.728	.9335	.6480	.8331	.9284
.676	.9335	.6356	.8252	.9244
.624	.9335	.6253	.8184	.9209
.572	.9381	.6169	.8109	.9170
.520	.9428	.6064	.8020	.9123
.468	.9381	.6004	.8000	.9112
.416	.9335	.5903	.7952	.9086
.364	.9289	.5823	.7918	.9067
.312	.9243	.5722	.7868	.9040
.260	.9197	.5539	.7761	.8980
.208	.9150	.5355	.7650	.8918
.156	.9197	.5147	.7481	.8819
.104	.9243	.4980	.7341	.8734
.052	.9243	.4857	.7249	.8677
0.000	.9243	.4795	.7202	.8648
-.104	.9150	.4961	.7363	.8748
-.156	.9243	.5123	.7445	.8797
-.208	.9335	.5304	.7538	.8852
-.260	.9243	.5495	.7710	.8952
-.312	.9335	.5676	.7798	.9001
-.364	.9335	.5800	.7883	.9048
-.416	.9335	.5904	.7953	.9086
-.468	.9335	.5966	.7994	.9109
-.520	.9335	.6048	.8049	.9138
-.572	.9335	.6110	.8090	.9160
-.624	.9335	.6214	.8159	.9196
-.676	.9381	.6336	.8218	.9227
-.728	.9428	.6478	.8289	.9263
-.780	.9381	.6625	.8403	.9320
-.832	.9335	.6771	.8517	.9376
-.884	.9381	.6955	.8610	.9421
-.936	.9428	.7201	.8739	.9481
-.988	.9566	.7380	.8783	.9502
-1.040	.9705	.7622	.8862	.9538

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A FEYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(w) x/D = 5.0; y/D = 0.21; $\alpha = 0^{\circ}$;

p_∞ = 2483.46 N/m^2 (51.87 lb/ft^2);
q_∞ = 15 231.35 N/m^2 (318.11 lb/ft^2);
$p_{t,\infty}$ = 85 901.97 N/m^2 (1794.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0715	.7451	.8339	.9288
.988	1.0115	.7272	.8479	.9358
.936	.9514	.7052	.8609	.9420
.884	.9468	.6848	.8504	.9370
.832	.9422	.6706	.8436	.9337
.780	.9376	.6523	.8341	.9289
.728	.9329	.6360	.8256	.9246
.676	.9329	.6195	.8149	.9191
.624	.9329	.6092	.8081	.9155
.572	.9329	.6010	.8026	.9126
.520	.9329	.5927	.7971	.9096
.468	.9283	.5847	.7936	.9078
.416	.9237	.5746	.7887	.9051
.364	.9191	.5604	.7808	.9007
.312	.9145	.5420	.7699	.8946
.260	.9099	.5072	.7466	.8810
.208	.9052	.4806	.7286	.8701
.156	.9099	.4474	.7012	.8526
.104	.9145	.4265	.6829	.8405
.052	.9145	.4141	.6729	.8336
0.000	.9145	.4100	.6696	.8313
−.104	.9052	.4223	.6830	.8405
−.156	.9145	.4405	.6941	.8479
−.208	.9237	.4691	.7126	.8600
−.260	.9145	.5006	.7398	.8769
−.312	.9237	.5312	.7583	.8879
−.364	.9237	.5539	.7744	.8971
−.416	.9237	.5684	.7844	.9027
−.468	.9237	.5767	.7901	.9059
−.520	.9237	.5849	.7958	.9089
−.572	.9237	.5932	.8014	.9119
−.624	.9237	.6056	.8097	.9164
−.676	.9283	.6199	.8171	.9203
−.728	.9329	.6362	.8258	.9247
−.780	.9329	.6506	.8351	.9294
−.832	.9329	.6651	.8443	.9340
−.884	.9376	.6814	.8525	.9380
−.936	.9422	.7019	.8631	.9431
−.988	.9514	.7180	.8687	.9457
−1.040	.9607	.7403	.8778	.9500

(x) x/D = 5.0; y/D = 0.0; $\alpha = 0^{\circ}$;

p_∞ = 2483.74 N/m^2 (51.87 lb/ft^2);
q_∞ = 15 233.05 N/m^2 (318.15 lb/ft^2);
$p_{t,\infty}$ = 85 911.55 N/m^2 (1794.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0801	.7397	.8275	.9256
.988	1.0155	.7179	.8408	.9322
.936	.9509	.7002	.8581	.9407
.884	.9463	.6798	.8476	.9356
.832	.9416	.6636	.8395	.9316
.780	.9370	.6494	.8325	.9281
.728	.9324	.6352	.8254	.9245
.676	.9324	.6249	.8187	.9210
.624	.9324	.6167	.8132	.9182
.572	.9324	.6105	.8092	.9161
.520	.9324	.6023	.8037	.9132
.468	.9324	.5961	.7996	.9110
.416	.9324	.5858	.7926	.9072
.364	.9278	.5716	.7849	.9030
.312	.9232	.5533	.7742	.8970
.260	.9186	.5247	.7558	.8864
.208	.9139	.5022	.7413	.8778
.156	.9139	.4734	.7197	.8645
.104	.9139	.4528	.7038	.8543
.052	.9186	.4381	.6906	.8456
0.000	.9232	.4338	.6855	.8422
−.104	.9139	.4571	.7072	.8565
−.156	.9232	.4732	.7159	.8621
−.208	.9324	.4935	.7275	.8693
−.260	.9232	.5229	.7526	.8845
−.312	.9324	.5452	.7647	.8916
−.364	.9278	.5681	.7825	.9017
−.416	.9324	.5824	.7903	.9060
−.468	.9278	.5888	.7966	.9094
−.520	.9232	.5973	.8044	.9135
−.572	.9232	.6035	.8085	.9157
−.624	.9232	.6097	.8127	.9179
−.676	.9278	.6198	.8173	.9204
−.728	.9324	.6320	.8233	.9234
−.780	.9324	.6444	.8313	.9275
−.832	.9324	.6589	.8406	.9322
−.884	.9370	.6752	.8489	.9362
−.936	.9416	.6936	.8582	.9407
−.988	.9509	.7117	.8652	.9440
−1.040	.9601	.7361	.8756	.9489

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(y) x/D = 5.0; y/D = -0.42; $\alpha = 0^o$;

p_∞ = 2481.38 N/m2 (51.82 lb/ft2);
q_∞ = 15 218.61 N/m2 (317.85 lb/ft2);
$p_{t,\infty}$ = 85 830.15 N/m2 (1792.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0901	.7717	.8414	.9325
.988	1.0162	.7523	.8604	.9418
.936	.9423	.7329	.8819	.9518
.884	.9377	.7043	.8666	.9447
.832	.9331	.6818	.8548	.9391
.780	.9238	.6637	.8476	.9356
.728	.9146	.6435	.8388	.9313
.676	.9054	.6253	.8311	.9274
.624	.8961	.6113	.8260	.9248
.572	.9100	.6004	.8123	.9177
.520	.9238	.5895	.7988	.9106
.468	.9331	.5788	.7876	.9045
.416	.9423	.5680	.7764	.8982
.364	.9469	.5472	.7602	.8890
.312	.9516	.5841	.7835	.9022
.260	.9654	.5979	.7870	.9041
.208	.9793	.5973	.7810	.9008
.156	1.0116	.5835	.7595	.8885
.104	1.0439	.5614	.7333	.8729
.052	1.0439	.5221	.7072	.8565
0.000	1.0439	.5015	.6931	.8473
-.104	1.0255	.5580	.7377	.8756
-.156	1.0070	.5713	.7532	.8849
-.208	.9885	.5763	.7635	.8909
-.260	.9747	.5831	.7735	.8966
-.312	.9562	.5777	.7773	.8988
-.364	.9469	.5388	.7543	.8856
-.416	.9238	.5544	.7746	.8972
-.468	.9146	.5693	.7889	.9052
-.520	.9054	.5842	.8033	.9130
-.572	.9054	.5986	.8131	.9182
-.624	.9054	.6110	.8215	.9225
-.676	.9100	.6294	.8317	.9277
-.728	.9146	.6478	.8416	.9327
-.780	.9192	.6662	.8513	.9374
-.832	.9238	.6867	.8622	.9426
-.884	.9285	.7072	.8727	.9476
-.936	.9331	.7297	.8843	.9529
-.988	.9469	.7477	.8886	.9548
-1.040	.9608	.7698	.8951	.9578

(z) x/D = 6.0; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 2480.41 N/m2 (51.80 lb/ft2);
q_∞ = 15 212.67 N/m2 (317.72 lb/ft2);
$p_{t,\infty}$ = 85 796.63 N/m2 (1791.90 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0446	.7339	.8382	.9310
.988	.9845	.7119	.8503	.9369
.936	.9244	.6960	.8677	.9452
.884	.9244	.6775	.8561	.9397
.832	.9244	.6672	.8496	.9366
.780	.9337	.6565	.8385	.9311
.728	.9429	.6499	.8302	.9270
.676	.9706	.6569	.8227	.9231
.624	.9984	.6557	.8104	.9167
.572	1.0585	.6612	.7904	.9060
.520	1.1185	.6544	.7649	.8917
.468	1.1324	.6538	.7598	.8888
.416	1.1463	.6428	.7489	.8823
.364	1.1463	.6263	.7392	.8765
.312	1.1463	.6057	.7269	.8690
.260	1.1278	.5756	.7144	.8611
.208	1.1093	.5517	.7052	.8552
.156	1.1139	.5226	.6849	.8418
.104	1.1185	.5017	.6697	.8314
.052	1.1139	.4854	.6601	.8246
0.000	1.1093	.4794	.6574	.8227
-.104	1.1093	.4998	.6713	.8325
-.156	1.1093	.5164	.6823	.8400
-.208	1.1093	.5454	.7012	.8526
-.260	1.1001	.5707	.7203	.8648
-.312	1.1001	.5955	.7358	.8744
-.364	1.0631	.6200	.7637	.8910
-.416	1.0908	.6353	.7631	.8907
-.468	1.0538	.6390	.7787	.8995
-.520	1.0169	.6407	.7937	.9078
-.572	1.0030	.6413	.7996	.9110
-.624	.9891	.6398	.8043	.9135
-.676	.9660	.6347	.8106	.9168
-.728	.9429	.6378	.8224	.9230
-.780	.9290	.6446	.8330	.9283
-.832	.9152	.6596	.8490	.9363
-.884	.9198	.6739	.8560	.9397
-.936	.9244	.6923	.8654	.9441
-.988	.9337	.7105	.8723	.9474
-1.040	.9429	.7328	.8816	.9516

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(aa) $x/D = 7.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 2480.55$ N/m2 (51.81 lb/ft2);
$q_\infty = 15\ 213.52$ N/m2 (317.74 lb/ft2);
$p_{t,\infty} = 85\ 801.42$ N/m2 (1792.00 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3031	.8191	.7929	.9074
.988	1.2384	.7953	.8014	.9119
.936	1.1737	.7734	.8118	.9175
.884	1.1644	.7512	.8032	.9129
.832	1.1552	.7331	.7966	.9094
.780	1.1459	.7129	.7887	.9051
.728	1.1367	.6948	.7818	.9013
.676	1.1321	.6805	.7753	.8976
.624	1.1275	.6725	.7723	.8959
.572	1.1321	.6620	.7647	.8916
.520	1.1367	.6556	.7594	.8885
.468	1.1321	.6455	.7551	.8860
.416	1.1275	.6354	.7507	.8834
.364	1.1182	.6214	.7454	.8803
.312	1.1090	.6053	.7388	.8763
.260	1.1044	.5849	.7278	.8695
.208	1.0997	.5686	.7191	.8641
.156	1.1044	.5416	.7003	.8520
.104	1.1090	.5207	.6852	.8420
.052	1.1090	.5021	.6729	.8336
0.000	1.1090	.4938	.6673	.8297
-.104	1.0997	.5168	.6855	.8422
-.156	1.0997	.5355	.6978	.8504
-.208	1.0997	.5583	.7125	.8599
-.260	1.0997	.5831	.7282	.8698
-.312	1.0997	.6017	.7397	.8768
-.364	1.0997	.6183	.7498	.8829
-.416	1.0997	.6348	.7598	.8887
-.468	1.0997	.6431	.7647	.8916
-.520	1.0997	.6534	.7708	.8951
-.572	1.1136	.6611	.7705	.8949
-.624	1.1275	.6708	.7713	.8954
-.676	1.1413	.6826	.7733	.8965
-.728	1.1552	.6944	.7753	.8976
-.780	1.1459	.7092	.7867	.9040
-.832	1.1367	.7262	.7993	.9108
-.884	1.1552	.7460	.8036	.9131
-.936	1.1737	.7700	.8100	.9165
-.988	1.1875	.7921	.8167	.9200
-1.040	1.2014	.8204	.8264	.9250

(bb) $x/D = 8.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 2481.52$ N/m2 (51.83 lb/ft2);
$q_\infty = 15\ 219.46$ N/m2 (317.87 lb/ft2);
$p_{t,\infty} = 85\ 834.94$ N/m2 (1792.70 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2107	.7847	.8051	.9139
.988	1.1507	.7648	.8152	.9193
.936	1.0906	.7427	.8252	.9244
.884	1.0860	.7202	.8144	.9188
.832	1.0813	.7060	.8080	.9155
.780	1.0767	.6897	.8004	.9114
.728	1.0721	.6776	.7950	.9085
.676	1.0721	.6652	.7877	.9045
.624	1.0721	.6549	.7816	.9011
.572	1.0767	.6485	.7761	.8981
.520	1.0813	.6421	.7706	.8950
.468	1.0813	.6339	.7656	.8921
.416	1.0813	.6256	.7606	.8892
.364	1.0767	.6134	.7548	.8858
.312	1.0721	.6033	.7502	.8831
.260	1.0675	.5850	.7403	.8772
.208	1.0628	.5707	.7328	.8726
.156	1.0628	.5460	.7167	.8626
.104	1.0628	.5232	.7016	.8529
.052	1.0628	.5067	.6905	.8455
0.000	1.0628	.4964	.6834	.8408
-.104	1.0444	.5130	.7008	.8524
-.156	1.0444	.5316	.7134	.8605
-.208	1.0444	.5564	.7299	.8708
-.260	1.0444	.5750	.7420	.8782
-.312	1.0444	.5916	.7526	.8845
-.364	1.0444	.6060	.7618	.8899
-.416	1.0444	.6184	.7695	.8943
-.468	1.0444	.6288	.7759	.8980
-.520	1.0444	.6350	.7797	.9001
-.572	1.0536	.6408	.7798	.9002
-.624	1.0628	.6486	.7812	.9009
-.676	1.0675	.6587	.7856	.9033
-.728	1.0721	.6709	.7911	.9064
-.780	1.0675	.6815	.7990	.9107
-.832	1.0628	.6961	.8093	.9162
-.884	1.0675	.7145	.8181	.9208
-.936	1.0721	.7350	.8280	.9258
-.988	1.0860	.7529	.8327	.9282
-1.040	1.0998	.7792	.8417	.9327

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(cc) x/D = 8.39; y/D = 3.0; $\alpha = 0^o$;

p_∞ = 2481.11 N/m^2 (51.82 lb/ft^2);
q_∞ = 15 216.92 N/m^2 (317.81 lb/ft^2);
$p_{t,\infty}$ = 85 820.57 N/m^2 (1792.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9319	.8990	.9822	.9934
.988	.8766	.9014	1.0140	1.0050
.936	.8212	.9038	1.0491	1.0170
.884	.8120	.9042	1.0552	1.0191
.832	.8028	.9025	1.0603	1.0207
.780	.8074	.9023	1.0572	1.0197
.728	.8120	.8980	1.0516	1.0179
.676	.8028	.8943	1.0555	1.0191
.624	.7935	.8947	1.0618	1.0212
.572	.7935	.8947	1.0618	1.0212
.520	.7935	.8926	1.0606	1.0208
.468	.7843	.8951	1.0683	1.0233
.416	.7751	.8934	1.0736	1.0250
.364	.7751	.8914	1.0724	1.0246
.312	.7751	.8893	1.0712	1.0242
.260	.7797	.8891	1.0679	1.0231
.208	.7843	.8889	1.0646	1.0221
.156	.7843	.8889	1.0646	1.0221
.104	.7843	.8889	1.0646	1.0221
.052	.7889	.8846	1.0589	1.0202
0.000	.7935	.8865	1.0569	1.0196
-.104	.7751	.8821	1.0668	1.0228
-.156	.7935	.8813	1.0539	1.0186
-.208	.8120	.8805	1.0413	1.0144
-.260	.7843	.8817	1.0603	1.0207
-.312	.8028	.8809	1.0475	1.0165
-.364	.8028	.8809	1.0475	1.0165
-.416	.7935	.8813	1.0539	1.0186
-.468	.7935	.8813	1.0539	1.0186
-.520	.7935	.8834	1.0551	1.0190
-.572	.7935	.8834	1.0551	1.0190
-.624	.7935	.8895	1.0588	1.0202
-.676	.7889	.8897	1.0620	1.0212
-.728	.7843	.8920	1.0664	1.0227
-.780	.7843	.8920	1.0664	1.0227
-.832	.7843	.8920	1.0664	1.0227
-.884	.7935	.8937	1.0612	1.0210
-.936	.8028	.8933	1.0549	1.0189
-.988	.8074	.8951	1.0529	1.0183
-1.040	.8120	.8949	1.0498	1.0173

(dd) x/D = 8.39; y/D = 2.0; $\alpha = 0^o$;

p_∞ = 2481.38 N/m^2 (51.82 lb/ft^2);
q_∞ = 15 218.61 N/m^2 (317.85 lb/ft^2);
$p_{t,\infty}$ = 85 830.15 N/m^2 (1792.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0899	.9671	.9420	.9777
.988	1.0252	.9699	.9727	.9898
.936	.9606	.9727	1.0063	1.0023
.884	.9606	.9707	1.0053	1.0019
.832	.9606	.9707	1.0053	1.0019
.780	.9560	.9688	1.0067	1.0024
.728	.9513	.9670	1.0082	1.0030
.676	.9467	.9631	1.0086	1.0031
.624	.9421	.9612	1.0101	1.0036
.572	.9513	.9608	1.0050	1.0018
.520	.9606	.9583	.9988	.9996
.468	.9560	.9585	1.0014	1.0005
.416	.9513	.9567	1.0028	1.0010
.364	.9513	.9567	1.0028	1.0010
.312	.9513	.9526	1.0007	1.0002
.260	.9467	.9528	1.0032	1.0012
.208	.9421	.9530	1.0058	1.0021
.156	.9467	.9528	1.0032	1.0012
.104	.9513	.9526	1.0007	1.0002
.052	.9513	.9485	.9985	.9994
0.000	.9513	.9485	.9985	.9994
-.104	.9329	.9453	1.0066	1.0024
-.156	.9421	.9449	1.0015	1.0005
-.208	.9513	.9445	.9964	.9987
-.260	.9329	.9453	1.0066	1.0024
-.312	.9421	.9449	1.0015	1.0005
-.364	.9375	.9451	1.0040	1.0015
-.416	.9329	.9453	1.0066	1.0024
-.468	.9282	.9455	1.0092	1.0033
-.520	.9236	.9477	1.0130	1.0047
-.572	.9282	.9475	1.0103	1.0037
-.624	.9329	.9494	1.0088	1.0032
-.676	.9375	.9513	1.0073	1.0026
-.728	.9421	.9552	1.0069	1.0025
-.780	.9375	.9554	1.0095	1.0034
-.832	.9329	.9556	1.0121	1.0043
-.884	.9421	.9552	1.0069	1.0025
-.936	.9513	.9569	1.0029	1.0010
-.988	.9606	.9585	.9989	.9996
-1.040	.9698	.9602	.9950	.9982

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^o$;

p_∞ = 2482.07 N/m^2 (51.84 lb/ft^2);
q_∞ = 15 222.86 N/m^2 (317.94 lb/ft^2);
$p_{t,\infty}$ = 85 854.09 N/m^2 (1793.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0716	.9295	.9314	.9733
.988	1.0116	.9321	.9599	.9849
.936	.9515	.9306	.9890	.9960
.884	.9469	.9267	.9893	.9961
.832	.9423	.9249	.9907	.9966
.780	.9423	.9208	.9885	.9958
.728	.9423	.9167	.9863	.9950
.676	.9377	.9127	.9866	.9951
.624	.9330	.9109	.9881	.9956
.572	.9469	.9082	.9794	.9924
.520	.9607	.9035	.9698	.9887
.468	.9515	.9039	.9747	.9906
.416	.9423	.8982	.9763	.9912
.364	.9423	.8941	.9741	.9903
.312	.9423	.8899	.9718	.9895
.260	.9377	.8860	.9721	.9896
.208	.9330	.8862	.9746	.9905
.156	.9377	.8840	.9710	.9891
.104	.9423	.8838	.9685	.9882
.052	.9469	.8815	.9649	.9868
0.000	.9515	.8813	.9624	.9858
-.104	.9330	.8770	.9695	.9886
-.156	.9423	.8766	.9645	.9867
-.208	.9515	.8762	.9596	.9847
-.260	.9284	.8792	.9732	.9900
-.312	.9377	.8809	.9693	.9885
-.364	.9377	.8830	.9704	.9889
-.416	.9238	.8836	.9780	.9918
-.468	.9238	.8897	.9814	.9931
-.520	.9238	.8918	.9825	.9935
-.572	.9284	.8937	.9811	.9930
-.624	.9330	.8996	.9819	.9933
-.676	.9330	.9017	.9831	.9937
-.728	.9330	.9058	.9853	.9946
-.780	.9284	.9060	.9879	.9955
-.832	.9238	.9124	.9938	.9977
-.884	.9284	.9143	.9924	.9972
-.936	.9330	.9182	.9920	.9971
-.988	.9423	.9199	.9880	.9956
-1.040	.9515	.9215	.9841	.9941

(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^o$;

p_∞ = 2480.41 N/m^2 (51.80 lb/ft^2);
q_∞ = 15 212.67 N/m^2 (317.72 lb/ft^2);
$p_{t,\infty}$ = 85 796.63 N/m^2 (1791.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2480	.9676	.8805	.9512
.988	1.2017	.9573	.8925	.9566
.936	1.1555	.9470	.9053	.9622
.884	1.1509	.9307	.8993	.9596
.832	1.1463	.9165	.8942	.9574
.780	1.1370	.9005	.8899	.9554
.728	1.1278	.8865	.8866	.9539
.676	1.1232	.8702	.8802	.9510
.624	1.1185	.8519	.8727	.9476
.572	1.1370	.8408	.8599	.9416
.520	1.1555	.8277	.8463	.9350
.468	1.1509	.8155	.8418	.9327
.416	1.1463	.8054	.8382	.9310
.364	1.1417	.7892	.8314	.9276
.312	1.1370	.7811	.8289	.9263
.260	1.1232	.7715	.8288	.9262
.208	1.1093	.7659	.8309	.9273
.156	1.1185	.7593	.8239	.9238
.104	1.1278	.7548	.8181	.9207
.052	1.1278	.7527	.8170	.9202
0.000	1.1278	.7486	.8147	.9190
-.104	1.1093	.7509	.8228	.9232
-.156	1.1047	.7532	.8257	.9247
-.208	1.1001	.7596	.8310	.9273
-.260	1.0954	.7619	.8340	.9289
-.312	1.0908	.7724	.8415	.9326
-.364	1.0908	.7766	.8437	.9337
-.416	1.0816	.7894	.8543	.9389
-.468	1.0816	.8018	.8610	.9421
-.520	1.0816	.8142	.8676	.9452
-.572	1.0954	.8280	.8694	.9460
-.624	1.1093	.8398	.8701	.9464
-.676	1.1185	.8539	.8737	.9480
-.728	1.1278	.8741	.8804	.9511
-.780	1.1185	.8870	.8905	.9557
-.832	1.1093	.8998	.9006	.9602
-.884	1.1278	.9155	.9010	.9604
-.936	1.1463	.9333	.9023	.9609
-.988	1.1278	.9423	.9141	.9661
-1.040	1.1093	.9452	.9231	.9699

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^\circ$;

$p_\infty = 2482.77$ N/m2 (51.85 lb/ft2);
$q_\infty = 15\ 227.10$ N/m2 (318.02 lb/ft2);
$p_{t,\infty} = 85\ 878.03$ N/m2 (1793.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2837	.9230	.8479	.9358
.988	1.2191	.9053	.8617	.9424
.936	1.1544	.8916	.8788	.9504
.884	1.1498	.8692	.8695	.9461
.832	1.1452	.8530	.8630	.9430
.780	1.1360	.8348	.8573	.9403
.728	1.1267	.8126	.8492	.9364
.676	1.1221	.7943	.8413	.9325
.624	1.1175	.7760	.8333	.9285
.572	1.1360	.7587	.8172	.9203
.520	1.1544	.7475	.8047	.9137
.468	1.1452	.7377	.8026	.9126
.416	1.1360	.7237	.7982	.9102
.364	1.1313	.7094	.7919	.9068
.312	1.1267	.7035	.7902	.9059
.260	1.1175	.6915	.7867	.9039
.208	1.1082	.6878	.7878	.9046
.156	1.1175	.6792	.7796	.9000
.104	1.1267	.6726	.7726	.8961
.052	1.1221	.6707	.7731	.8964
0.000	1.1175	.6689	.7737	.8967
-.104	1.1082	.6688	.7768	.8985
-.156	1.1036	.6752	.7822	.9015
-.208	1.0990	.6816	.7875	.9044
-.260	1.0944	.6839	.7905	.9061
-.312	1.0898	.6965	.7994	.9109
-.364	1.0898	.6985	.8006	.9115
-.416	1.0805	.7093	.8102	.9166
-.468	1.0805	.7217	.8172	.9203
-.520	1.0805	.7361	.8254	.9245
-.572	1.0944	.7520	.8289	.9263
-.624	1.1082	.7679	.8324	.9281
-.676	1.1221	.7838	.8358	.9297
-.728	1.1360	.8017	.8401	.9319
-.780	1.1221	.8230	.8564	.9399
-.832	1.1082	.8401	.8707	.9466
-.884	1.1267	.8599	.8736	.9480
-.936	1.1452	.8818	.8775	.9498
-.988	1.1590	.8977	.8801	.9510
-1.040	1.1729	.9136	.8826	.9521

(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^\circ$;

$p_\infty = 2482.07$ N/m2 (51.84 lb/ft2);
$q_\infty = 15\ 222.86$ N/m2 (317.94 lb/ft2);
$p_{t,\infty} = 85\ 854.09$ N/m2 (1793.10 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2650	.8613	.8251	.9244
.988	1.2004	.8415	.8373	.9305
.936	1.1357	.8238	.8517	.9376
.884	1.1311	.7994	.8406	.9322
.832	1.1265	.7790	.8316	.9276
.780	1.1173	.7547	.8219	.9227
.728	1.1080	.7345	.8142	.9187
.676	1.1080	.7181	.8050	.9139
.624	1.1080	.7037	.7969	.9095
.572	1.1219	.6866	.7823	.9015
.520	1.1357	.6757	.7713	.8954
.468	1.1265	.6658	.7688	.8939
.416	1.1173	.6559	.7662	.8924
.364	1.1127	.6417	.7594	.8885
.312	1.1080	.6275	.7525	.8845
.260	1.0988	.6114	.7460	.8806
.208	1.0896	.5995	.7418	.8781
.156	1.0942	.5849	.7311	.8716
.104	1.0988	.5723	.7217	.8657
.052	1.0942	.5684	.7207	.8651
0.000	1.0896	.5645	.7198	.8645
-.104	1.0803	.5731	.7284	.8699
-.156	1.0803	.5814	.7336	.8731
-.208	1.0803	.5917	.7401	.8771
-.260	1.0757	.6023	.7483	.8820
-.312	1.0757	.6188	.7585	.8880
-.364	1.0757	.6292	.7648	.8916
-.416	1.0711	.6438	.7753	.8976
-.468	1.0711	.6562	.7827	.9018
-.520	1.0711	.6686	.7901	.9058
-.572	1.0850	.6783	.7907	.9062
-.624	1.0988	.6922	.7937	.9078
-.676	1.1080	.7062	.7983	.9103
-.728	1.1173	.7244	.8052	.9140
-.780	1.1080	.7434	.8191	.9213
-.832	1.0988	.7624	.8329	.9283
-.884	1.1127	.7865	.8408	.9322
-.936	1.1265	.8127	.8494	.9365
-.988	1.1404	.8307	.8535	.9385
-1.040	1.1542	.8528	.8596	.9414

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^o$;

$p_\infty = 2480.69$ N/m^2 (51.81 lb/ft^2);
$q_\infty = 15\,214.37$ N/m^2 (317.76 lb/ft^2);
$p_{t,\infty} = 85\,806.21$ N/m^2 (1792.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2481	.8100	.8056	.9142
.988	1.1834	.7861	.8150	.9192
.936	1.1187	.7642	.8265	.9251
.884	1.1141	.7397	.8148	.9191
.832	1.1094	.7234	.8075	.9152
.780	1.1048	.7030	.7977	.9100
.728	1.1002	.6847	.7889	.9052
.676	1.1002	.6702	.7805	.9005
.624	1.1002	.6579	.7733	.8965
.572	1.1094	.6471	.7637	.8910
.520	1.1187	.6364	.7542	.8855
.468	1.1141	.6222	.7473	.8814
.416	1.1094	.6079	.7402	.8772
.364	1.1002	.5918	.7334	.8730
.312	1.0909	.5716	.7239	.8671
.260	1.0863	.5512	.7123	.8598
.208	1.0817	.5328	.7018	.8530
.156	1.0863	.5119	.6865	.8428
.104	1.0909	.4993	.6765	.8361
.052	1.0863	.4933	.6739	.8343
0.000	1.0817	.4914	.6740	.8344
-.104	1.0725	.4972	.6809	.8391
-.156	1.0725	.5076	.6880	.8439
-.208	1.0725	.5242	.6991	.8512
-.260	1.0678	.5389	.7104	.8586
-.312	1.0678	.5596	.7239	.8671
-.364	1.0678	.5803	.7372	.8753
-.416	1.0632	.6032	.7532	.8849
-.468	1.0632	.6156	.7609	.8894
-.520	1.0632	.6280	.7686	.8938
-.572	1.0771	.6377	.7695	.8943
-.624	1.0909	.6495	.7716	.8955
-.676	1.1002	.6636	.7766	.8984
-.728	1.1094	.6776	.7815	.9011
-.780	1.1002	.6925	.7934	.9076
-.832	1.0909	.7095	.8064	.9146
-.884	1.1002	.7297	.8144	.9188
-.936	1.1094	.7541	.8244	.9240
-.988	1.1233	.7741	.8301	.9269
-1.040	1.1372	.7983	.8378	.9308

(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^o$;

$p_\infty = 2482.35$ N/m^2 (51.84 lb/ft^2);
$q_\infty = 15\,224.56$ N/m^2 (317.97 lb/ft^2);
$p_{t,\infty} = 85\,863.67$ N/m^2 (1793.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2095	.7925	.8095	.9163
.988	1.1495	.7725	.8198	.9216
.936	1.0895	.7505	.8300	.9268
.884	1.0848	.7301	.8204	.9219
.832	1.0802	.7159	.8141	.9187
.780	1.0802	.6974	.8035	.9131
.728	1.0802	.6850	.7963	.9092
.676	1.0802	.6706	.7879	.9046
.624	1.0802	.6603	.7818	.9013
.572	1.0848	.6498	.7739	.8968
.520	1.0895	.6351	.7635	.8909
.468	1.0848	.6189	.7553	.8861
.416	1.0802	.6026	.7469	.8811
.364	1.0756	.5863	.7383	.8760
.312	1.0710	.5720	.7308	.8714
.260	1.0664	.5516	.7192	.8642
.208	1.0618	.5374	.7114	.8592
.156	1.0618	.5188	.6990	.8512
.104	1.0618	.5044	.6892	.8447
.052	1.0618	.4961	.6836	.8409
0.000	1.0618	.4920	.6807	.8389
-.104	1.0433	.5009	.6929	.8471
-.156	1.0433	.5133	.7014	.8528
-.208	1.0433	.5299	.7126	.8600
-.260	1.0433	.5443	.7223	.8661
-.312	1.0433	.5588	.7319	.8721
-.364	1.0433	.5754	.7426	.8786
-.416	1.0433	.5940	.7546	.8857
-.468	1.0433	.6106	.7650	.8918
-.520	1.0433	.6292	.7766	.8983
-.572	1.0525	.6432	.7817	.9012
-.624	1.0618	.6532	.7843	.9027
-.676	1.0664	.6633	.7887	.9051
-.728	1.0710	.6755	.7942	.9081
-.780	1.0664	.6881	.8033	.9130
-.832	1.0618	.7028	.8136	.9184
-.884	1.0664	.7211	.8224	.9230
-.936	1.0710	.7437	.8333	.9285
-.988	1.0848	.7637	.8390	.9314
-1.040	1.0987	.7838	.8446	.9341

TABLE 3.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(kk) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 2481.38$ N/m2 (51.82 lb/ft2);
$q_\infty = 15\ 218.61$ N/m2 (317.85 lb/ft2);
$p_{t,\infty} = 85\ 830.15$ N/m2 (1792.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1902	.7752	.8070	.9150
.988	1.1302	.7552	.8174	.9204
.936	1.0702	.7372	.8300	.9268
.884	1.0656	.7169	.8202	.9218
.832	1.0610	.7006	.8126	.9179
.780	1.0564	.6843	.8048	.9138
.728	1.0518	.6701	.7982	.9102
.676	1.0518	.6598	.7920	.9069
.624	1.0518	.6515	.7871	.9042
.572	1.0610	.6429	.7784	.8994
.520	1.0702	.6383	.7723	.8959
.468	1.0656	.6303	.7691	.8941
.416	1.0610	.6223	.7658	.8922
.364	1.0610	.6099	.7582	.8878
.312	1.0610	.6016	.7530	.8848
.260	1.0564	.5853	.7444	.8796
.208	1.0518	.5690	.7356	.8743
.156	1.0518	.5463	.7207	.8651
.104	1.0518	.5236	.7056	.8555
.052	1.0518	.5050	.6930	.8472
0.000	1.0518	.4968	.6873	.8434
-.104	1.0425	.5115	.7004	.8521
-.156	1.0425	.5301	.7131	.8603
-.208	1.0425	.5508	.7269	.8690
-.260	1.0333	.5699	.7426	.8786
-.312	1.0333	.5885	.7547	.8857
-.364	1.0333	.5989	.7613	.8896
-.416	1.0241	.6117	.7728	.8962
-.468	1.0241	.6200	.7781	.8992
-.520	1.0241	.6282	.7832	.9021
-.572	1.0333	.6340	.7833	.9021
-.624	1.0425	.6398	.7834	.9021
-.676	1.0472	.6499	.7878	.9046
-.728	1.0518	.6621	.7934	.9077
-.780	1.0472	.6727	.8015	.9120
-.832	1.0425	.6874	.8120	.9176
-.884	1.0472	.7037	.8198	.9216
-.936	1.0518	.7242	.8298	.9267
-.988	1.0656	.7422	.8345	.9291
-1.040	1.0794	.7663	.8426	.9331

(ll) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^o$;

$p_\infty = 2481.80$ N/m2 (51.83 lb/ft2);
$q_\infty = 15\ 221.16$ N/m2 (317.90 lb/ft2);
$p_{t,\infty} = 85\ 844.51$ N/m2 (1792.90 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1162	.7989	.8460	.9348
.988	1.0562	.7830	.8610	.9421
.936	.9962	.7651	.8763	.9493
.884	.9962	.7445	.8645	.9437
.832	.9962	.7280	.8549	.9391
.780	.9962	.7033	.8402	.9320
.728	.9962	.6827	.8278	.9258
.676	.9962	.6580	.8127	.9180
.624	.9962	.6374	.7999	.9112
.572	1.0009	.6166	.7849	.9030
.520	1.0055	.5958	.7698	.8945
.468	1.0009	.5795	.7609	.8894
.416	.9962	.6189	.7882	.9048
.364	.9962	.6271	.7934	.9076
.312	.9962	.6209	.7895	.9055
.260	.9962	.6127	.7842	.9026
.208	.9962	.6106	.7829	.9019
.156	.9962	.6044	.7789	.8997
.104	.9962	.5900	.7696	.8944
.052	.9962	.5591	.7491	.8825
0.000	.9962	.5446	.7394	.8766
-.104	.9870	.5753	.7635	.8909
-.156	.9916	.5958	.7751	.8975
-.208	.9962	.6018	.7772	.8987
-.260	.9824	.6065	.7857	.9034
-.312	.9870	.6063	.7838	.9024
-.364	.9870	.6146	.7891	.9053
-.416	.9778	.6171	.7944	.9082
-.468	.9778	.5819	.7715	.8954
-.520	.9778	.5799	.7701	.8947
-.572	.9778	.6026	.7850	.9031
-.624	.9778	.6274	.8010	.9118
-.676	.9824	.6478	.8120	.9176
-.728	.9870	.6683	.8228	.9232
-.780	.9824	.6912	.8388	.9313
-.832	.9778	.7141	.8546	.9390
-.884	.9870	.7343	.8625	.9428
-.936	.9962	.7566	.8715	.9470
-.988	1.0009	.7750	.8799	.9509
-1.040	1.0055	.7954	.8894	.9552

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 1074.42$ N/m^2 (22.44 lb/ft^2);
$q_\infty = 11\ 734.52$ N/m^2 (245.08 lb/ft^2);
$p_{t,\infty} = 152\ 580.02$ N/m^2 (3186.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4796	.5534	.6116	.8433
.988	1.2008	.5123	.6531	.8684
.936	.9221	.4844	.7248	.9056
.884	.8685	.4537	.7228	.9047
.832	.8148	.4337	.7295	.9079
.780	.7612	.4136	.7371	.9114
.728	.7076	.3963	.7483	.9164
.676	.6755	.3837	.7537	.9188
.624	.6433	.3738	.7623	.9226
.572	.6111	.3666	.7745	.9277
.520	.5790	.3621	.7908	.9344
.468	.5146	.3529	.8281	.9486
.416	.4503	.3465	.8772	.9655
.364	.4718	.3380	.8464	.9552
.312	.4932	.3188	.8040	.9396
.260	.5682	.1754	.5556	.8049
.208	.6433	.0538	.2893	.5229
.156	.6647	.0074	.1056	.2107
.104	.6862	.0009	.0357	.0723
.052	.6755	.0065	.0982	.1964
0.000	.6647	.0118	.1332	.2633
-.104	.6647	.0076	.1066	.2127
-.156	.6647	.0029	.0664	.1339
-.208	.6647	.0161	.1558	.3049
-.260	.6004	.1186	.4444	.7095
-.312	.6004	.2768	.6790	.8826
-.364	.6111	.3193	.7229	.9047
-.416	.5361	.3372	.7931	.9353
-.468	.5468	.3476	.7973	.9370
-.520	.5575	.3527	.7954	.9362
-.572	.5575	.3634	.8074	.9409
-.624	.5575	.3687	.8133	.9431
-.676	.6111	.3808	.7894	.9338
-.728	.6647	.3956	.7714	.9264
-.780	.7184	.4103	.7558	.9197
-.832	.7720	.4304	.7467	.9157
-.884	.8363	.4529	.7359	.9108
-.936	.9006	.4834	.7326	.9093
-.988	.9864	.5081	.7177	.9022
-1.040	1.0722	.5541	.7189	.9028

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 1074.15$ N/m^2 (22.43 lb/ft^2);
$q_\infty = 11\ 731.57$ N/m^2 (245.02 lb/ft^2);
$p_{t,\infty} = 152\ 541.71$ N/m^2 (3185.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2649	.4889	.6217	.8496
.988	1.0183	.4603	.6723	.8790
.936	.7718	.4397	.7548	.9193
.884	.7289	.4194	.7585	.9209
.832	.6860	.4044	.7678	.9249
.780	.6432	.3922	.7808	.9303
.728	.6003	.3825	.7983	.9373
.676	.6003	.3719	.7871	.9329
.624	.6003	.3692	.7843	.9317
.572	.5896	.3641	.7859	.9324
.520	.5788	.3644	.7934	.9354
.468	.5360	.3628	.8227	.9467
.416	.4931	.3665	.8621	.9605
.364	.7289	.4567	.7915	.9347
.312	.9647	.4750	.7016	.8943
.260	1.1899	.5148	.6577	.8710
.208	1.4150	.5091	.5999	.8357
.156	1.4686	.3848	.5119	.7707
.104	1.5222	.2732	.4237	.6885
.052	1.5650	.2368	.3890	.6508
0.000	1.6079	.2519	.3958	.6584
-.104	1.5436	.2571	.4081	.6720
-.156	1.5007	.3365	.4735	.7373
-.208	1.4578	.4771	.5721	.8168
-.260	1.0612	.5191	.6994	.8932
-.312	1.0183	.4828	.6885	.8876
-.364	1.0076	.4483	.6670	.8761
-.416	.5788	.3572	.7856	.9323
-.468	.5681	.3575	.7932	.9354
-.520	.5574	.3551	.7981	.9373
-.572	.5360	.3583	.8176	.9447
-.624	.5145	.3588	.8350	.9511
-.676	.5574	.3658	.8100	.9419
-.728	.6003	.3754	.7908	.9344
-.780	.6324	.3826	.7778	.9291
-.832	.6646	.3952	.7711	.9263
-.884	.6860	.4134	.7763	.9285
-.936	.7075	.4342	.7834	.9314
-.988	.7611	.4543	.7726	.9269
-1.040	.8147	.4851	.7716	.9265

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 1074.72$ N/m^2 (22.45 lb/ft^2);
$q_\infty = 11\ 737.83$ N/m^2 (245.15 lb/ft^2);
$p_{t,\infty} = 152\ 623.11$ N/m^2 (3187.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1571	.4571	.6286	.8539
.988	.9214	.4336	.6860	.8863
.936	.6857	.4207	.7833	.9313
.884	.6642	.4052	.7810	.9304
.832	.6428	.3951	.7840	.9316
.780	.6214	.3876	.7898	.9340
.728	.6000	.3828	.7987	.9375
.676	.6000	.3774	.7932	.9353
.624	.6000	.3774	.7932	.9353
.572	.7071	.4495	.7973	.9370
.520	.8142	.4416	.7364	.9110
.468	1.0285	.4577	.6671	.8761
.416	1.2428	.5298	.6529	.8682
.364	1.3606	.5455	.6332	.8567
.312	1.4785	.5479	.6088	.8415
.260	1.4892	.5263	.5945	.8322
.208	1.4999	.4859	.5692	.8148
.156	1.4892	.4113	.5255	.7818
.104	1.4785	.3660	.4976	.7586
.052	1.5106	.3437	.4770	.7404
0.000	1.5428	.3294	.4621	.7266
-.104	1.4999	.3605	.4903	.7523
-.156	1.5321	.3946	.5075	.7671
-.208	1.5642	.4634	.5443	.7965
-.260	1.3606	.5301	.6242	.8512
-.312	1.3928	.5507	.6288	.8540
-.364	1.2106	.5526	.6756	.8808
-.416	1.2214	.5122	.6476	.8652
-.468	1.0392	.4446	.6541	.8689
-.520	.8571	.4357	.7130	.8999
-.572	.7178	.4524	.7939	.9356
-.624	.5785	.3730	.8030	.9392
-.676	.5893	.3728	.7954	.9362
-.728	.6000	.3752	.7908	.9344
-.780	.6000	.3805	.7964	.9366
-.832	.6000	.3885	.8047	.9399
-.884	.6214	.3987	.8010	.9384
-.936	.6428	.4142	.8027	.9391
-.988	.6750	.4294	.7977	.9371
-1.040	.7071	.4527	.8001	.9381

(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^o$;

$p_\infty = 1074.69$ N/m^2 (22.45 lb/ft^2);
$q_\infty = 11\ 737.46$ N/m^2 (245.14 lb/ft^2);
$p_{t,\infty} = 152\ 618.32$ N/m^2 (3187.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3925	1.0008	.8478	.9557
.988	1.1783	1.0060	.9240	.9798
.936	.9640	1.0110	1.0241	1.0057
.884	.9640	1.0110	1.0241	1.0057
.832	.9640	1.0110	1.0241	1.0057
.780	.9533	1.0113	1.0300	1.0070
.728	.9426	1.0115	1.0359	1.0084
.676	.9319	1.0091	1.0406	1.0094
.624	.9212	1.0094	1.0468	1.0108
.572	.9426	1.0062	1.0332	1.0078
.520	.9640	1.0057	1.0214	1.0051
.468	.9533	1.0060	1.0272	1.0064
.416	.9426	1.0062	1.0332	1.0078
.364	.9426	1.0062	1.0332	1.0078
.312	.9426	1.0062	1.0332	1.0078
.260	.9426	1.0035	1.0318	1.0075
.208	.9426	1.0035	1.0318	1.0075
.156	.9426	1.0035	1.0318	1.0075
.104	.9426	1.0035	1.0318	1.0075
.052	.9426	1.0035	1.0318	1.0075
0.000	.9426	1.0035	1.0318	1.0075
-.104	.9212	.9972	1.0404	1.0094
-.156	.9426	.9967	1.0283	1.0066
-.208	.9640	.9962	1.0165	1.0039
-.260	.9212	.9972	1.0404	1.0094
-.312	.9426	.9967	1.0283	1.0066
-.364	.9319	.9969	1.0343	1.0080
-.416	.9212	.9945	1.0390	1.0091
-.468	.9105	.9948	1.0453	1.0104
-.520	.8998	.9950	1.0516	1.0118
-.572	.9105	.9921	1.0439	1.0101
-.624	.9212	.9919	1.0376	1.0088
-.676	.9212	.9919	1.0376	1.0088
-.728	.9212	.9919	1.0376	1.0088
-.780	.9105	.9894	1.0425	1.0098
-.832	.8998	.9870	1.0474	1.0109
-.884	.9105	.9841	1.0396	1.0092
-.936	.9212	.9839	1.0335	1.0078
-.988	.9319	.9836	1.0274	1.0064
-1.040	.9426	.9834	1.0214	1.0051

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^o$;

$p_\infty = 1074.52$ N/m^2 (22.44 lb/ft^2);
$q_\infty = 11\ 735.62$ N/m^2 (245.10 lb/ft^2);
$p_{t,\infty} = 152\ 594.38$ N/m^2 (3187.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	2.1841	1.5410	.8400	.9529
.988	1.9914	1.5162	.8726	.9640
.936	1.7986	1.4995	.9131	.9766
.884	1.7344	1.4797	.9236	.9797
.832	1.6702	1.4599	.9349	.9830
.780	1.6916	1.4380	.9220	.9793
.728	1.7130	1.4161	.9092	.9755
.676	1.6595	1.4014	.9190	.9784
.624	1.6059	1.3813	.9274	.9808
.572	1.6273	1.3648	.9158	.9774
.520	1.6488	1.3536	.9061	.9745
.468	1.6381	1.3379	.9037	.9738
.416	1.6273	1.3248	.9023	.9734
.364	1.5952	1.3149	.9079	.9751
.312	1.5631	1.3050	.9137	.9768
.260	1.5417	1.2975	.9174	.9779
.208	1.5203	1.2927	.9221	.9793
.156	1.5417	1.2868	.9136	.9768
.104	1.5631	1.2836	.9062	.9746
.052	1.5524	1.2839	.9094	.9755
0.000	1.5417	1.2815	.9117	.9762
-.104	1.5417	1.2815	.9117	.9762
-.156	1.5310	1.2844	.9159	.9775
-.208	1.5203	1.2927	.9221	.9793
-.260	1.4775	1.2990	.9377	.9837
-.312	1.4668	1.3126	.9460	.9860
-.364	1.4453	1.3131	.9532	.9880
-.416	1.4132	1.3299	.9701	.9925
-.468	1.3918	1.3464	.9835	.9959
-.520	1.3704	1.3629	.9973	.9993
-.572	1.5203	1.3727	.9502	.9872
-.624	1.6702	1.3798	.9089	.9754
-.676	1.7130	1.3948	.9024	.9734
-.728	1.7558	1.4151	.8978	.9720
-.780	1.6809	1.4329	.9233	.9796
-.832	1.6059	1.4507	.9504	.9873
-.884	1.7023	1.4831	.9334	.9825
-.936	1.7986	1.5075	.9155	.9774
-.988	1.8201	1.5283	.9164	.9776
-1.040	1.8415	1.5518	.9180	.9781

(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^o$;

$p_\infty = 1074.18$ N/m^2 (22.43 lb/ft^2);
$q_\infty = 11\ 731.94$ N/m^2 (245.03 lb/ft^2);
$p_{t,\infty} = 152\ 546.50$ N/m^2 (3186.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.6699	1.0762	.8028	.9391
.988	1.4344	1.0499	.8555	.9583
.936	1.1989	1.0289	.9264	.9805
.884	1.1668	.9977	.9247	.9800
.832	1.1347	.9771	.9280	.9810
.780	1.1133	.9510	.9243	.9799
.728	1.0919	.9249	.9204	.9788
.676	1.0598	.9043	.9238	.9798
.624	1.0276	.8838	.9274	.9808
.572	1.0276	.8652	.9175	.9780
.520	1.0276	.8518	.9104	.9759
.468	1.0062	.8364	.9117	.9762
.416	.9848	.8209	.9130	.9766
.364	.9741	.8025	.9076	.9750
.312	.9634	.7948	.9083	.9752
.260	.9527	.7817	.9058	.9745
.208	.9420	.7740	.9064	.9747
.156	.9313	.7689	.9086	.9753
.104	.9206	.7665	.9125	.9765
.052	.9206	.7612	.9093	.9755
0.000	.9206	.7612	.9093	.9755
-.104	.9206	.7602	.9087	.9753
-.156	.9313	.7707	.9097	.9756
-.208	.9420	.7731	.9059	.9745
-.260	.9313	.7787	.9144	.9770
-.312	.9420	.7891	.9152	.9773
-.364	.9420	.7944	.9183	.9782
-.416	.9420	.8078	.9260	.9804
-.468	.9420	.8265	.9367	.9835
-.520	.9420	.8425	.9457	.9860
-.572	.9848	.8601	.9346	.9829
-.624	1.0276	.8805	.9256	.9803
-.676	1.0491	.8987	.9255	.9803
-.728	1.0705	.9248	.9295	.9814
-.780	1.0812	.9459	.9354	.9831
-.832	1.0919	.9644	.9398	.9843
-.884	1.1561	.9975	.9289	.9813
-.936	1.2203	1.0280	.9178	.9780
-.988	1.2739	1.0535	.9094	.9755
-1.040	1.3274	1.0789	.9016	.9732

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(g) $x/D = 2.5$; $y/D = 1.0$; $\alpha = 0^o$;

$p_\infty = 1075.19$ N/m^2 (22.46 lb/ft^2);
$q_\infty = 11\ 742.99$ N/m^2 (245.26 lb/ft^2);
$p_{t,\infty} = 152\ 690.14$ N/m^2 (3189.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3065	.7032	.7337	.9098
.988	1.0709	.6717	.7920	.9348
.936	.8353	.6507	.8826	.9673
.884	.8032	.6248	.8820	.9671
.832	.7710	.5990	.8814	.9669
.780	.7496	.5782	.8783	.9659
.728	.7282	.5548	.8728	.9641
.676	.7175	.5391	.8668	.9621
.624	.7068	.5207	.8583	.9593
.572	.6961	.5076	.8540	.9578
.520	.6854	.4946	.8495	.9562
.468	.6640	.4845	.8542	.9579
.416	.6425	.4743	.8592	.9596
.364	.6532	.4634	.8423	.9537
.312	.6640	.4578	.8304	.9495
.260	.6747	.4496	.8163	.9443
.208	.6854	.4440	.8049	.9399
.156	.7818	.4390	.7494	.9169
.104	.8781	.4313	.7009	.8939
.052	.8888	.4284	.6943	.8906
0.000	.8996	.4282	.6899	.8883
-.104	.8781	.4273	.6977	.8924
-.156	.7603	.4304	.7524	.9182
-.208	.6425	.4359	.8237	.9470
-.260	.7710	.4381	.7538	.9189
-.312	.6532	.4463	.8266	.9481
-.364	.6532	.4517	.8315	.9499
-.416	.6640	.4621	.8343	.9509
-.468	.6640	.4728	.8438	.9543
-.520	.6640	.4835	.8533	.9576
-.572	.6640	.4968	.8650	.9615
-.624	.6640	.5102	.8766	.9653
-.676	.6854	.5283	.8780	.9658
-.728	.7068	.5492	.8815	.9669
-.780	.7175	.5676	.8894	.9694
-.832	.7282	.5861	.8971	.9718
-.884	.7603	.6120	.8972	.9718
-.936	.7925	.6406	.8991	.9724
-.988	.8246	.6612	.8955	.9713
-1.040	.8567	.6951	.9008	.9729

(h) $x/D = 2.5$; $y/D = 0.83$; $\alpha = 0^o$;

$p_\infty = 1074.62$ N/m^2 (22.44 lb/ft^2);
$q_\infty = 11\ 736.73$ N/m^2 (245.13 lb/ft^2);
$p_{t,\infty} = 152\ 608.75$ N/m^2 (3187.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2201	.6204	.7131	.9000
.988	.9954	.5886	.7690	.9254
.936	.7706	.5700	.8601	.9599
.884	.7492	.5413	.8500	.9564
.832	.7278	.5205	.8457	.9549
.780	.6957	.5026	.8500	.9564
.728	.6636	.4847	.8547	.9580
.676	.6636	.4688	.8405	.9531
.624	.6636	.4554	.8285	.9488
.572	.6529	.4450	.8256	.9477
.520	.6422	.4347	.8227	.9467
.468	.7278	.4246	.7638	.9232
.416	.8134	.4172	.7162	.9015
.364	.8562	.4081	.6904	.8886
.312	.8990	.4044	.6707	.8781
.260	.8455	.4004	.6882	.8874
.208	.7920	.4017	.7122	.8996
.156	.8134	.3985	.7000	.8935
.104	.8348	.3953	.6882	.8874
.052	.7278	.3926	.7345	.9102
0.000	.6208	.3952	.7979	.9372
-.104	.5994	.3976	.8144	.9436
-.156	.5994	.3976	.8144	.9436
-.208	.5994	.3976	.8144	.9436
-.260	.6208	.3970	.7998	.9379
-.312	.6208	.3997	.8024	.9390
-.364	.6208	.4024	.8051	.9400
-.416	.6422	.4099	.7989	.9376
-.468	.6422	.4179	.8067	.9406
-.520	.6422	.4233	.8119	.9426
-.572	.6422	.4340	.8221	.9464
-.624	.6422	.4447	.8322	.9501
-.676	.6422	.4581	.8446	.9545
-.728	.6422	.4741	.8592	.9596
-.780	.6636	.4896	.8590	.9595
-.832	.6850	.5079	.8611	.9602
-.884	.7064	.5314	.8674	.9623
-.936	.7278	.5576	.8753	.9649
-.988	.7599	.5810	.8744	.9646
-1.040	.7920	.6096	.8773	.9656

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^o$;

p_∞ = 1074.59 N/m^2 (22.44 lb/ft^2);
q_∞ = 11 736.36 N/m^2 (245.12 lb/ft^2);
$p_{t,\infty}$ = 152 603.96 N/m^2 (3187.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1773	.5321	.6723	.8790
.988	.9526	.5056	.7285	.9074
.936	.7278	.4897	.8202	.9457
.884	.7064	.4688	.8147	.9437
.832	.6850	.4533	.8135	.9432
.780	.6636	.4378	.8123	.9427
.728	.6422	.4250	.8135	.9432
.676	.6422	.4170	.8058	.9403
.624	.6422	.4063	.7954	.9362
.572	.6422	.4010	.7902	.9341
.520	.6422	.3983	.7875	.9331
.468	.6208	.3935	.7961	.9365
.416	.5994	.3940	.8108	.9422
.364	.6422	.3930	.7822	.9309
.312	.6850	.4240	.7867	.9327
.260	.8348	.5111	.7824	.9310
.208	.9847	.5449	.7439	.9144
.156	1.1131	.5444	.6993	.8932
.104	1.2416	.5386	.6586	.8715
.052	1.2416	.5386	.6586	.8715
0.000	1.2416	.5359	.6570	.8705
-.104	1.2416	.5392	.6590	.8717
-.156	1.1773	.5408	.6777	.8819
-.208	1.1131	.5370	.6946	.8907
-.260	.9526	.4794	.7094	.8982
-.312	.8884	.4034	.6739	.8799
-.364	.8669	.3879	.6689	.8772
-.416	.6636	.3929	.7695	.9256
-.468	.6422	.3934	.7827	.9311
-.520	.6208	.3939	.7966	.9367
-.572	.6101	.3969	.8065	.9406
-.624	.5994	.4025	.8194	.9454
-.676	.6101	.4102	.8200	.9457
-.728	.6208	.4206	.8232	.9468
-.780	.6315	.4338	.8288	.9489
-.832	.6422	.4469	.8342	.9508
-.884	.6529	.4653	.8442	.9544
-.936	.6636	.4864	.8562	.9585
-.988	.6957	.5070	.8537	.9577
-1.040	.7278	.5303	.8536	.9577

(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^o$;

p_∞ = 1073.78 N/m^2 (22.43 lb/ft^2);
q_∞ = 11 727.52 N/m^2 (244.93 lb/ft^2);
$p_{t,\infty}$ = 152 489.05 N/m^2 (3184.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1152	.4848	.6593	.8719
.988	.8900	.4637	.7218	.9042
.936	.6648	.4478	.8207	.9459
.884	.6541	.4321	.8127	.9429
.832	.6434	.4216	.8095	.9417
.780	.6219	.4115	.8134	.9432
.728	.6005	.4067	.8230	.9468
.676	.6112	.4011	.8101	.9419
.624	.6219	.3982	.8001	.9381
.572	.8686	.4002	.6788	.8825
.520	1.1152	.5222	.6843	.8854
.468	1.2010	.5521	.6780	.8821
.416	1.2868	.5446	.6506	.8669
.364	1.2868	.5393	.6474	.8650
.312	1.2868	.5339	.6442	.8632
.260	1.2760	.5262	.6422	.8620
.208	1.2653	.5211	.6418	.8618
.156	1.2760	.5129	.6340	.8571
.104	1.2868	.5046	.6262	.8524
.052	1.2868	.4992	.6229	.8504
0.000	1.2868	.4966	.6212	.8494
-.104	1.2653	.5042	.6313	.8555
-.156	1.2760	.5120	.6334	.8568
-.208	1.2868	.5171	.6339	.8571
-.260	1.2439	.5235	.6487	.8658
-.312	1.2546	.5286	.6491	.8660
-.364	1.0509	.5363	.7144	.9006
-.416	1.2224	.5401	.6647	.8748
-.468	1.0187	.5531	.7369	.9112
-.520	.8150	.4671	.7571	.9203
-.572	.7184	.3919	.7385	.9120
-.624	.6219	.3942	.7961	.9365
-.676	.6112	.3945	.8034	.9393
-.728	.6005	.3974	.8135	.9432
-.780	.6005	.4027	.8190	.9453
-.832	.6005	.4134	.8298	.9492
-.884	.6005	.4268	.8431	.9540
-.936	.6005	.4429	.8588	.9594
-.988	.6327	.4581	.8510	.9567
-1.040	.6648	.4787	.8486	.9559

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(k) $x/D = 2.5$; $y/D = 0.21$; $\alpha = 0^\circ$;

$p_\infty = 1073.44$ N/m^2 (22.42 lb/ft^2);
$q_\infty = 11\ 723.84$ N/m^2 (244.86 lb/ft^2);
$p_{t,\infty} = 152\ 441.17$ N/m^2 (3183.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0926	.4589	.6481	.8654
.988	.8784	.4375	.7057	.8964
.936	.6641	.4267	.8015	.9386
.884	.6534	.4136	.7956	.9363
.832	.6427	.4058	.7946	.9359
.780	.6213	.3984	.8007	.9383
.728	.5999	.3962	.8127	.9429
.676	.7606	.4163	.7399	.9126
.624	.9212	.5565	.7772	.9288
.572	1.1141	.5464	.7004	.8937
.520	1.3069	.5337	.6390	.8601
.468	1.3069	.5283	.6358	.8582
.416	1.3069	.5230	.6326	.8563
.364	1.2962	.5152	.6305	.8550
.312	1.2854	.5022	.6250	.8517
.260	1.2640	.4680	.6085	.8413
.208	1.2426	.4257	.5853	.8260
.156	1.2426	.3749	.5493	.8002
.104	1.2426	.3374	.5211	.7783
.052	1.2319	.3190	.5088	.7682
0.000	1.2212	.3166	.5091	.7684
-.104	1.2212	.3473	.5333	.7879
-.156	1.2533	.3814	.5516	.8020
-.208	1.2854	.4315	.5794	.8219
-.260	1.2533	.4753	.6158	.8460
-.312	1.2854	.5013	.6245	.8514
-.364	1.2640	.5152	.6384	.8598
-.416	1.2854	.5227	.6377	.8593
-.468	1.2640	.5286	.6467	.8646
-.520	1.2426	.5318	.6542	.8689
-.572	1.1569	.5393	.6827	.8846
-.624	1.0712	.5280	.7021	.8945
-.676	.8570	.3886	.6734	.8796
-.728	.6427	.3912	.7802	.9301
-.780	.6320	.3941	.7897	.9339
-.832	.6213	.3971	.7994	.9378
-.884	.6106	.4080	.8175	.9447
-.936	.5999	.4217	.8384	.9523
-.988	.6320	.4343	.8289	.9489
-1.040	.6641	.4522	.8252	.9476

(l) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 0^\circ$;

$p_\infty = 1073.88$ N/m^2 (22.43 lb/ft^2);
$q_\infty = 11\ 728.62$ N/m^2 (244.96 lb/ft^2);
$p_{t,\infty} = 152\ 503.41$ N/m^2 (3185.10 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0937	.4506	.6419	.8618
.988	.8685	.4295	.7032	.8951
.936	.6433	.4216	.8095	.9417
.884	.6326	.4085	.8036	.9394
.832	.6219	.4035	.8055	.9401
.780	.6969	.4683	.8197	.9455
.728	.7720	.4532	.7662	.9242
.676	.8363	.4436	.7283	.9073
.624	.9007	.5193	.7594	.9213
.572	1.1044	.5384	.6982	.8926
.520	1.3081	.5387	.6417	.8617
.468	1.3081	.5334	.6385	.8599
.416	1.3081	.5280	.6353	.8580
.364	1.2974	.5203	.6333	.8567
.312	1.2866	.5045	.6262	.8524
.260	1.2652	.4704	.6097	.8421
.208	1.2438	.4388	.5940	.8319
.156	1.2330	.3990	.5689	.8145
.104	1.2223	.3752	.5541	.8038
.052	1.2330	.3589	.5395	.7928
0.000	1.2438	.3479	.5289	.7845
-.104	1.2223	.3712	.5511	.8016
-.156	1.2545	.3892	.5570	.8059
-.208	1.2866	.4259	.5754	.8191
-.260	1.2545	.4696	.6118	.8435
-.312	1.2866	.4956	.6206	.8490
-.364	1.2759	.5146	.6351	.8578
-.416	1.2866	.5251	.6388	.8600
-.468	1.2759	.5307	.6449	.8636
-.520	1.2652	.5336	.6494	.8662
-.572	1.0829	.5301	.6996	.8933
-.624	.9007	.4570	.7123	.8996
-.676	.8578	.4339	.7112	.8991
-.728	.8149	.4483	.7417	.9135
-.780	.7184	.4640	.8037	.9395
-.832	.6219	.3942	.7961	.9365
-.884	.6112	.3971	.8061	.9404
-.936	.6004	.4107	.8271	.9483
-.988	.6219	.4236	.8253	.9476
-1.040	.6433	.4418	.8287	.9489

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(m) $x/D = 2.5$; $y/D = -0.42$; $\alpha = 0^o$;
$p_\infty = 1074.75$ N/m^2 (22.45 lb/ft^2);
$q_\infty = 11\ 738.20$ N/m^2 (245.16 lb/ft^2);
$p_{t,\infty} = 152\ 627.90$ N/m^2 (3187.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1353	.5745	.7113	.8991
.988	.9854	.5382	.7390	.9122
.936	.8354	.5045	.7771	.9288
.884	.7926	.4709	.7708	.9262
.832	.7498	.4480	.7730	.9271
.780	.6962	.4253	.7816	.9307
.728	.6427	.4106	.7993	.9378
.676	.6427	.4026	.7915	.9347
.624	.6427	.3973	.7863	.9326
.572	.6212	.3792	.7813	.9305
.520	.5998	.3584	.7730	.9271
.468	.8676	.3305	.6172	.8468
.416	1.1353	.5185	.6758	.8809
.364	1.2103	.5060	.6466	.8646
.312	1.2853	.5015	.6246	.8515
.260	1.2960	.5145	.6301	.8548
.208	1.3067	.5116	.6257	.8521
.156	1.3067	.5009	.6191	.8481
.104	1.3067	.5009	.6191	.8481
.052	1.2960	.4398	.5825	.8241
0.000	1.2853	.3251	.5030	.7632
-.104	1.3067	.4947	.6153	.8456
-.156	1.3281	.4941	.6100	.8423
-.208	1.3496	.5016	.6097	.8421
-.260	1.1353	.5123	.6717	.8787
-.312	1.1568	.5011	.6582	.8712
-.364	.9640	.5058	.7244	.9054
-.416	.9640	.4229	.6624	.8735
-.468	.7712	.3314	.6555	.8697
-.520	.5784	.3548	.7832	.9313
-.572	.5784	.3762	.8065	.9405
-.624	.5784	.3922	.8235	.9469
-.676	.6105	.3968	.8062	.9404
-.728	.6427	.4067	.7955	.9363
-.780	.6748	.4220	.7908	.9344
-.832	.7069	.4452	.7936	.9355
-.884	.7605	.4733	.7889	.9336
-.936	.8140	.5068	.7890	.9337
-.988	.7498	.5431	.8511	.9568
-1.040	.6855	.4858	.8419	.9536

(n) $x/D = 3.0$; $y/D = 0.0$; $\alpha = 0^o$;
$p_\infty = 1074.35$ N/m^2 (22.44 lb/ft^2);
$q_\infty = 11\ 733.78$ N/m^2 (245.07 lb/ft^2);
$p_{t,\infty} = 152\ 570.44$ N/m^2 (3186.50 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0922	.4558	.6460	.8642
.988	.9637	.5149	.7310	.9085
.936	.8352	.4914	.7670	.9246
.884	.8245	.4703	.7553	.9195
.832	.8138	.4999	.7838	.9315
.780	.9744	.5573	.7563	.9199
.728	1.1350	.5454	.6932	.8900
.676	1.1350	.5320	.6847	.8856
.624	1.1350	.5241	.6795	.8829
.572	1.1565	.5155	.6677	.8765
.520	1.1779	.5043	.6543	.8690
.468	1.1565	.4969	.6555	.8697
.416	1.1350	.4894	.6566	.8703
.364	1.1350	.4760	.6476	.8652
.312	1.1350	.4600	.6366	.8587
.260	1.1136	.4366	.6261	.8524
.208	1.0922	.4131	.6150	.8455
.156	1.0922	.3864	.5948	.8324
.104	1.0922	.3677	.5802	.8225
.052	1.0922	.3517	.5674	.8135
0.000	1.0922	.3463	.5631	.8104
-.104	1.0922	.3636	.5770	.8203
-.156	1.1136	.3765	.5815	.8233
-.208	1.1350	.4001	.5937	.8317
-.260	1.1136	.4301	.6214	.8495
-.312	1.1350	.4510	.6303	.8549
-.364	1.1350	.4724	.6451	.8637
-.416	1.1350	.4831	.6524	.8679
-.468	1.1350	.4911	.6578	.8710
-.520	1.1350	.4991	.6631	.8740
-.572	1.1565	.5066	.6619	.8733
-.624	1.1779	.5168	.6624	.8736
-.676	1.1672	.5278	.6725	.8791
-.728	1.1565	.5387	.6825	.8845
-.780	.9851	.5429	.7424	.9138
-.832	.8138	.4562	.7487	.9166
-.884	.8138	.4615	.7531	.9185
-.936	.8138	.4883	.7746	.9278
-.988	.7388	.5115	.8320	.9501
-1.040	.6639	.4464	.8200	.9457

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(o) x/D = 4.0; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 1074.05 N/m^2 (22.43 lb/ft^2);
q_∞ = 11 730.47 N/m^2 (245.00 lb/ft^2);
$p_{t,\infty}$ = 152 527.35 N/m^2 (3185.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4580	.6184	.6513	.8673
.988	1.2543	.5834	.6820	.8842
.936	1.0506	.5616	.7312	.9086
.884	1.0292	.5355	.7213	.9040
.832	1.0077	.5200	.7183	.9025
.780	.9970	.5069	.7130	.9000
.728	.9863	.4911	.7057	.8963
.676	.9756	.4807	.7020	.8945
.624	.9648	.4730	.7002	.8936
.572	.9648	.4650	.6942	.8905
.520	.9648	.4596	.6902	.8885
.468	.9434	.4495	.6902	.8885
.416	.9220	.4393	.6903	.8885
.364	.9220	.4260	.6797	.8830
.312	.9220	.4126	.6690	.8772
.260	.9112	.3968	.6599	.8722
.208	.9005	.3811	.6505	.8669
.156	.9005	.3624	.6344	.8574
.104	.9005	.3490	.6226	.8502
.052	.9005	.3410	.6154	.8457
0.000	.9005	.3357	.6105	.8426
-.104	.8791	.3477	.6289	.8541
-.156	.9005	.3579	.6304	.8550
-.208	.9220	.3707	.6341	.8572
-.260	.9005	.3900	.6581	.8712
-.312	.9220	.4055	.6632	.8740
-.364	.9220	.4216	.6762	.8811
-.416	.9220	.4377	.6890	.8879
-.468	.9220	.4457	.6953	.8911
-.520	.9220	.4537	.7015	.8943
-.572	.9434	.4586	.6972	.8921
-.624	.9648	.4661	.6950	.8910
-.676	.9648	.4768	.7029	.8950
-.728	.9648	.4875	.7108	.8989
-.780	.9756	.4979	.7144	.9006
-.832	.9863	.5110	.7198	.9032
-.884	1.0077	.5292	.7247	.9056
-.936	1.0292	.5501	.7311	.9086
-.988	1.0506	.5737	.7389	.9122
-1.040	1.0720	.6026	.7497	.9170

(p) x/D = 5.0; y/D = 3.0; $\alpha = 0^o$;

p_∞ = 1074.65 N/m^2 (22.44 lb/ft^2);
q_∞ = 11 737.09 N/m^2 (245.13 lb/ft^2);
$p_{t,\infty}$ = 152 613.53 N/m^2 (3187.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.9500	1.3850	.8428	.9539
.988	1.7464	1.3845	.8904	.9697
.936	1.5429	1.3813	.9462	.9861
.884	1.5214	1.3712	.9493	.9870
.832	1.5000	1.3664	.9544	.9883
.780	1.4893	1.3586	.9551	.9885
.728	1.4786	1.3509	.9558	.9887
.676	1.4571	1.3434	.9602	.9899
.624	1.4357	1.3386	.9656	.9913
.572	1.4786	1.3296	.9483	.9867
.520	1.5214	1.3259	.9335	.9826
.468	1.5107	1.3208	.9350	.9830
.416	1.5000	1.3131	.9356	.9832
.364	1.4786	1.3109	.9416	.9848
.312	1.4571	1.3061	.9467	.9863
.260	1.4464	1.3037	.9494	.9870
.208	1.4357	1.3013	.9520	.9877
.156	1.4357	1.3013	.9520	.9877
.104	1.4357	1.2986	.9510	.9874
.052	1.4357	1.3013	.9520	.9877
0.000	1.4357	1.3013	.9520	.9877
-.104	1.4357	1.2935	.9492	.9869
-.156	1.4143	1.2941	.9565	.9889
-.208	1.3929	1.2946	.9641	.9909
-.260	1.3714	1.2977	.9728	.9932
-.312	1.3500	1.3063	.9837	.9960
-.364	1.3393	1.3065	.9877	.9970
-.416	1.3071	1.3099	1.0011	1.0003
-.468	1.2964	1.3155	1.0073	1.0018
-.520	1.2857	1.3185	1.0127	1.0030
-.572	1.3714	1.3218	.9817	.9955
-.624	1.4571	1.3224	.9526	.9879
-.676	1.4786	1.3273	.9474	.9864
-.728	1.5000	1.3348	.9433	.9853
-.780	1.4679	1.3382	.9548	.9884
-.832	1.4357	1.3416	.9667	.9916
-.884	1.4893	1.3564	.9543	.9883
-.936	1.5429	1.3658	.9409	.9846
-.988	1.5536	1.3709	.9394	.9842
-1.040	1.5643	1.3786	.9388	.9841

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^o$;

$p_\infty = 1073.81$ N/m^2 (22.43 lb/ft^2);
$q_\infty = 11\ 727.89$ N/m^2 (244.94 lb/ft^2);
$p_{t,\infty} = 152\ 493.83$ N/m^2 (3184.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3511	.9324	.8307	.9496
.988	1.1366	.9242	.9017	.9732
.936	.9222	.9213	.9996	.9999
.884	.9114	.9136	1.0012	1.0003
.832	.9007	.9032	1.0014	1.0003
.780	.8793	.8957	1.0093	1.0022
.728	.8578	.8856	1.0160	1.0038
.676	.8471	.8778	1.0180	1.0043
.624	.8364	.8701	1.0199	1.0047
.572	.8364	.8647	1.0168	1.0040
.520	.8364	.8568	1.0121	1.0029
.468	.8149	.8519	1.0225	1.0053
.416	.7935	.8471	1.0332	1.0078
.364	.7935	.8391	1.0284	1.0067
.312	.7935	.8365	1.0267	1.0063
.260	.7935	.8338	1.0251	1.0059
.208	.7935	.8311	1.0234	1.0055
.156	.7935	.8285	1.0218	1.0052
.104	.7935	.8258	1.0202	1.0048
.052	.7935	.8258	1.0202	1.0048
0.000	.7935	.8258	1.0202	1.0048
-.104	.7720	.8184	1.0296	1.0070
-.156	.7828	.8209	1.0240	1.0057
-.208	.7935	.8206	1.0169	1.0040
-.260	.7828	.8209	1.0240	1.0057
-.312	.7935	.8233	1.0186	1.0044
-.364	.7935	.8233	1.0186	1.0044
-.416	.7935	.8286	1.0219	1.0052
-.468	.7935	.8366	1.0268	1.0063
-.520	.7935	.8393	1.0285	1.0067
-.572	.7935	.8473	1.0334	1.0078
-.624	.7935	.8527	1.0366	1.0085
-.676	.8042	.8604	1.0344	1.0080
-.728	.8149	.8682	1.0322	1.0075
-.780	.8257	.8733	1.0285	1.0067
-.832	.8364	.8811	1.0264	1.0062
-.884	.8578	.8886	1.0178	1.0042
-.936	.8793	.8988	1.0110	1.0026
-.988	.9007	.9063	1.0031	1.0007
-1.040	.9222	.9165	.9969	.9992

(r) $x/D = 5.0$; $y/D = 1.5$; $\alpha = 0^o$;

$p_\infty = 1075.19$ N/m^2 (22.46 lb/ft^2);
$q_\infty = 11\ 742.99$ N/m^2 (245.26 lb/ft^2);
$p_{t,\infty} = 152\ 690.14$ N/m^2 (3189.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1568	.7548	.8078	.9410
.988	.9533	.7464	.8848	.9680
.936	.7498	.7406	.9938	.9985
.884	.7284	.7305	1.0014	1.0003
.832	.7070	.7230	1.0113	1.0027
.780	.6962	.7126	1.0117	1.0028
.728	.6855	.7022	1.0121	1.0029
.676	.6748	.6971	1.0164	1.0039
.624	.6641	.6894	1.0189	1.0045
.572	.6641	.6841	1.0149	1.0036
.520	.6641	.6788	1.0110	1.0026
.468	.6534	.6737	1.0154	1.0037
.416	.6427	.6686	1.0200	1.0047
.364	.6427	.6606	1.0139	1.0033
.312	.6427	.6553	1.0098	1.0023
.260	.6427	.6553	1.0098	1.0023
.208	.6427	.6633	1.0159	1.0038
.156	.7391	.6717	.9533	.9880
.104	.8355	.7173	.9266	.9806
.052	.8462	.7649	.9508	.9874
0.000	.8569	.7460	.9331	.9824
-.104	.8355	.6885	.9078	.9751
-.156	.7605	.6502	.9246	.9800
-.208	.6855	.6466	.9712	.9928
-.260	.7498	.6451	.9275	.9809
-.312	.6748	.6469	.9791	.9948
-.364	.6641	.6471	.9871	.9968
-.416	.6641	.6525	.9912	.9978
-.468	.6534	.6581	1.0036	1.0009
-.520	.6427	.6637	1.0162	1.0039
-.572	.6427	.6690	1.0203	1.0048
-.624	.6427	.6744	1.0243	1.0057
-.676	.6427	.6797	1.0284	1.0067
-.728	.6427	.6877	1.0344	1.0080
-.780	.6534	.6955	1.0317	1.0074
-.832	.6641	.7006	1.0271	1.0064
-.884	.6748	.7110	1.0265	1.0062
-.936	.6855	.7241	1.0278	1.0065
-.988	.7070	.7316	1.0173	1.0041
-1.040	.7284	.7418	1.0092	1.0022

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(s) x/D = 5.0; y/D = 1.0; $\alpha = 0^o$;

p_∞ = 1075.60 N/m^2 (22.46 lb/ft^2);
q_∞ = 11 747.40 N/m^2 (245.35 lb/ft^2);
$p_{t,\infty}$ = 152 747.60 N/m^2 (3190.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4341	.8330	.7621	.9225
.988	1.2308	.8113	.8119	.9426
.936	1.0274	.7922	.8781	.9658
.884	1.0167	.7659	.8679	.9625
.832	1.0060	.7422	.8589	.9595
.780	.9953	.7185	.8496	.9563
.728	.9846	.6922	.8384	.9524
.676	.9739	.6738	.8318	.9500
.624	.9632	.6554	.8249	.9475
.572	.9739	.6365	.8084	.9413
.520	.9846	.6203	.7937	.9355
.468	.9739	.6073	.7896	.9339
.416	.9632	.5915	.7837	.9315
.364	.9525	.5758	.7775	.9290
.312	.9418	.5681	.7767	.9286
.260	.9418	.5575	.7694	.9256
.208	.9418	.5521	.7657	.9240
.156	.9418	.5468	.7620	.9224
.104	.9418	.5415	.7583	.9208
.052	.9418	.5388	.7564	.9200
0.000	.9418	.5362	.7545	.9192
-.104	.9418	.5380	.7558	.9197
-.156	.9525	.5404	.7533	.9186
-.208	.9632	.5455	.7526	.9183
-.260	.9311	.5516	.7697	.9257
-.312	.9418	.5594	.7707	.9261
-.364	.9418	.5647	.7744	.9277
-.416	.9204	.5786	.7929	.9352
-.468	.9204	.5946	.8038	.9395
-.520	.9204	.6053	.8110	.9423
-.572	.9418	.6235	.8136	.9433
-.624	.9632	.6390	.8145	.9436
-.676	.9632	.6577	.8263	.9480
-.728	.9632	.6790	.8396	.9528
-.780	.9632	.7004	.8527	.9574
-.832	.9632	.7218	.8656	.9617
-.884	.9953	.7477	.8667	.9621
-.936	1.0274	.7736	.8677	.9624
-.988	1.0488	.7918	.8689	.9628
-1.040	1.0702	.8180	.8742	.9646

(t) x/D = 5.0; y/D = 0.83; $\alpha = 0^o$;

p_∞ = 1074.62 N/m^2 (22.44 lb/ft^2);
q_∞ = 11 736.73 N/m^2 (245.13 lb/ft^2);
$p_{t,\infty}$ = 152 608.75 N/m^2 (3187.30 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4358	.7592	.7272	.9067
.988	1.2215	.7324	.7743	.9277
.936	1.0072	.7109	.8401	.9530
.884	.9965	.6792	.8256	.9477
.832	.9857	.6555	.8155	.9440
.780	.9643	.6320	.8096	.9417
.728	.9429	.6033	.7999	.9380
.676	.9429	.5846	.7874	.9330
.624	.9429	.5633	.7729	.9271
.572	.9429	.5500	.7637	.9232
.520	.9429	.5367	.7544	.9191
.468	.9322	.5236	.7495	.9169
.416	.9215	.5159	.7482	.9164
.364	.9215	.5052	.7404	.9129
.312	.9215	.4999	.7365	.9111
.260	.9107	.4948	.7371	.9113
.208	.9000	.4897	.7376	.9116
.156	.9000	.4844	.7336	.9098
.104	.9000	.4817	.7316	.9088
.052	.9107	.4788	.7251	.9058
0.000	.9215	.4785	.7207	.9036
-.104	.9000	.4775	.7284	.9073
-.156	.9215	.4770	.7195	.9031
-.208	.9429	.4818	.7148	.9008
-.260	.9000	.4829	.7325	.9092
-.312	.9215	.4903	.7295	.9078
-.364	.9215	.4930	.7315	.9088
-.416	.9000	.5042	.7485	.9165
-.468	.9000	.5122	.7544	.9191
-.520	.9000	.5229	.7622	.9225
-.572	.9107	.5387	.7691	.9254
-.624	.9215	.5544	.7757	.9282
-.676	.9322	.5702	.7821	.9309
-.728	.9429	.5913	.7919	.9348
-.780	.9429	.6127	.8061	.9404
-.832	.9429	.6340	.8200	.9457
-.884	.9643	.6602	.8274	.9484
-.936	.9857	.6890	.8361	.9515
-.988	1.0072	.7152	.8427	.9539
-1.040	1.0286	.7441	.8505	.9566

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(u) $x/D = 5.0$; $y/D = 0.63$; $\alpha = 0^o$;

$p_\infty = 1075.53$ N/m^2 (22.46 lb/ft^2);
$q_\infty = 11\ 746.67$ N/m^2 (245.33 lb/ft^2);
$p_{t,\infty} = 152\ 738.02$ N/m^2 (3190.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3911	.6717	.6949	.8909
.988	1.1878	.6367	.7322	.9091
.936	.9845	.6150	.7904	.9342
.884	.9738	.5860	.7758	.9282
.832	.9631	.5650	.7659	.9241
.780	.9417	.5415	.7583	.9208
.728	.9203	.5234	.7542	.9190
.676	.9203	.5074	.7426	.9138
.624	.9203	.4968	.7347	.9103
.572	.9203	.4861	.7268	.9066
.520	.9203	.4782	.7208	.9037
.468	.9096	.4704	.7192	.9029
.416	.8989	.4627	.7175	.9021
.364	.8989	.4574	.7133	.9001
.312	.8989	.4520	.7092	.8981
.260	.8882	.4443	.7073	.8972
.208	.8775	.4419	.7097	.8983
.156	.8775	.4366	.7054	.8962
.104	.8775	.4313	.7011	.8940
.052	.8775	.4313	.7011	.8940
0.000	.8775	.4286	.6989	.8929
-.104	.8775	.4274	.6979	.8925
-.156	.8882	.4298	.6957	.8913
-.208	.8989	.4296	.6913	.8891
-.260	.8882	.4379	.7021	.8946
-.312	.8989	.4403	.6999	.8934
-.364	.8882	.4432	.7064	.8967
-.416	.8989	.4510	.7083	.8977
-.468	.8882	.4566	.7170	.9019
-.520	.8775	.4648	.7278	.9071
-.572	.8882	.4753	.7315	.9088
-.624	.8989	.4830	.7331	.9095
-.676	.9096	.4934	.7366	.9111
-.728	.9203	.5092	.7439	.9144
-.780	.9203	.5252	.7555	.9196
-.832	.9203	.5439	.7688	.9253
-.884	.9417	.5701	.7781	.9292
-.936	.9631	.5990	.7886	.9335
-.988	.9845	.6252	.7969	.9368
-1.040	1.0059	.6567	.8080	.9411

(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^o$;

$p_\infty = 1075.66$ N/m^2 (22.47 lb/ft^2);
$q_\infty = 11\ 748.14$ N/m^2 (245.37 lb/ft^2);
$p_{t,\infty} = 152\ 757.18$ N/m^2 (3190.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3916	.6051	.6594	.8719
.988	1.1775	.5757	.6992	.8931
.936	.9634	.5543	.7585	.9209
.884	.9527	.5306	.7463	.9155
.832	.9420	.5122	.7374	.9115
.780	.9206	.4968	.7346	.9102
.728	.8992	.4813	.7316	.9088
.676	.8992	.4707	.7235	.9050
.624	.8992	.4627	.7173	.9021
.572	.8992	.4547	.7111	.8990
.520	.8992	.4467	.7048	.8959
.468	.8885	.4416	.7050	.8960
.416	.8777	.4312	.7009	.8940
.364	.8670	.4235	.6989	.8929
.312	.8563	.4158	.6968	.8919
.260	.8563	.4025	.6856	.8861
.208	.8563	.3892	.6741	.8800
.156	.8563	.3758	.6625	.8736
.104	.8563	.3652	.6530	.8683
.052	.8563	.3625	.6506	.8669
0.000	.8563	.3572	.6458	.8641
-.104	.8349	.3621	.6585	.8714
-.156	.8456	.3725	.6637	.8743
-.208	.8563	.3856	.6711	.8783
-.260	.8563	.3963	.6803	.8833
-.312	.8670	.4068	.6849	.8858
-.364	.8563	.4151	.6962	.8916
-.416	.8777	.4252	.6960	.8915
-.468	.8670	.4309	.7049	.8960
-.520	.8563	.4391	.7161	.9015
-.572	.8670	.4442	.7158	.9013
-.624	.8777	.4493	.7155	.9012
-.676	.8885	.4597	.7194	.9030
-.728	.8992	.4729	.7252	.9058
-.780	.8992	.4836	.7333	.9096
-.832	.8992	.4969	.7434	.9142
-.884	.9206	.5178	.7500	.9172
-.936	.9420	.5387	.7562	.9199
-.988	.9634	.5622	.7639	.9233
-1.040	.9848	.5911	.7748	.9278

TABLE 4.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(w) $x/D = 5.0$; $y/D = 0.21$; $\alpha = 0^o$;

$p_\infty = 1076.00$ N/m^2 (22.47 lb/ft^2);
$q_\infty = 11\ 751.82$ N/m^2 (245.44 lb/ft^2);
$p_{t,\infty} = 152\ 805.06$ N/m^2 (3191.40 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.3691	.5761	.6487	.8658
.988	1.1659	.5465	.6846	.8856
.936	.9626	.5275	.7402	.9128
.884	.9412	.5040	.7318	.9089
.832	.9199	.4886	.7288	.9075
.780	.9092	.4755	.7232	.9049
.728	.8985	.4625	.7175	.9021
.676	.8878	.4521	.7136	.9003
.624	.8771	.4444	.7118	.8994
.572	.8771	.4364	.7054	.8962
.520	.8771	.4311	.7011	.8940
.468	.8664	.4234	.6990	.8930
.416	.8557	.4156	.6969	.8920
.364	.8557	.4023	.6857	.8861
.312	.8557	.3890	.6743	.8801
.260	.8450	.3680	.6599	.8722
.208	.8343	.3496	.6473	.8650
.156	.8343	.3363	.6349	.8577
.104	.8343	.3256	.6247	.8515
.052	.8343	.3203	.6196	.8483
0.000	.8343	.3176	.6170	.8467
-.104	.8343	.3218	.6211	.8493
-.156	.8450	.3296	.6245	.8514
-.208	.8557	.3454	.6353	.8579
-.260	.8450	.3670	.6591	.8717
-.312	.8557	.3828	.6689	.8771
-.364	.8557	.3962	.6804	.8834
-.416	.8557	.4069	.6896	.8882
-.468	.8557	.4149	.6963	.8916
-.520	.8557	.4202	.7008	.8939
-.572	.8557	.4283	.7075	.8972
-.624	.8557	.4363	.7141	.9005
-.676	.8664	.4441	.7159	.9014
-.728	.8771	.4545	.7199	.9033
-.780	.8771	.4652	.7283	.9073
-.832	.8771	.4785	.7387	.9121
-.884	.8985	.4941	.7416	.9134
-.936	.9199	.5149	.7482	.9164
-.988	.9412	.5358	.7545	.9192
-1.040	.9626	.5620	.7641	.9233

(x) $x/D = 5.0$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 1075.66$ N/m^2 (22.47 lb/ft^2);
$q_\infty = 11\ 748.14$ N/m^2 (245.37 lb/ft^2);
$p_{t,\infty} = 152\ 757.18$ N/m^2 (3190.40 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.3481	.5635	.6465	.8645
.988	1.1448	.5365	.6846	.8856
.936	.9415	.5175	.7414	.9133
.884	.9201	.5021	.7387	.9121
.832	.8987	.4893	.7378	.9117
.780	.8880	.4762	.7323	.9091
.728	.8773	.4658	.7287	.9074
.676	.8773	.4552	.7203	.9035
.624	.8773	.4499	.7161	.9014
.572	.8773	.4419	.7097	.8983
.520	.8773	.4365	.7054	.8962
.468	.8666	.4288	.7034	.8952
.416	.8559	.4184	.6992	.8931
.364	.8452	.4107	.6971	.8920
.312	.8345	.4003	.6926	.8897
.260	.8345	.3843	.6786	.8824
.208	.8345	.3710	.6668	.8760
.156	.8238	.3580	.6592	.8718
.104	.8131	.3476	.6538	.8687
.052	.8238	.3393	.6418	.8618
0.000	.8345	.3337	.6323	.8562
-.104	.8131	.3412	.6477	.8652
-.156	.8345	.3487	.6464	.8645
-.208	.8559	.3615	.6499	.8665
-.260	.8345	.3754	.6707	.8781
-.312	.8559	.3883	.6735	.8797
-.364	.8452	.4019	.6896	.8882
-.416	.8559	.4124	.6941	.8905
-.468	.8452	.4206	.7054	.8962
-.520	.8345	.4263	.7147	.9008
-.572	.8452	.4313	.7144	.9006
-.624	.8559	.4364	.7141	.9005
-.676	.8559	.4445	.7206	.9036
-.728	.8559	.4525	.7271	.9067
-.780	.8559	.4605	.7335	.9097
-.832	.8559	.4739	.7441	.9145
-.884	.8773	.4840	.7428	.9139
-.936	.8987	.5049	.7495	.9170
-.988	.9201	.5231	.7540	.9189
-1.040	.9415	.5467	.7620	.9224

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^{\circ}$;

$p_\infty = 1074.99$ N/m^2 (22.45 lb/ft^2);
$q_\infty = 11\ 740.78$ N/m^2 (245.21 lb/ft^2);
$p_{t,\infty} = 152\ 661.41$ N/m^2 (3188.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3496	.6118	.6733	.8795
.988	1.1461	.5821	.7127	.8998
.936	.9426	.5551	.7674	.9247
.884	.9319	.5287	.7533	.9186
.832	.9211	.5104	.7443	.9146
.780	.8997	.4922	.7397	.9125
.728	.8783	.4768	.7368	.9112
.676	.8676	.4610	.7290	.9076
.624	.8569	.4480	.7231	.9048
.572	.8676	.4397	.7119	.8994
.520	.8783	.4261	.6966	.8918
.468	.8676	.4157	.6922	.8895
.416	.8569	.4000	.6833	.8849
.364	.8462	.3896	.6786	.8824
.312	.8355	.4005	.6924	.8896
.260	.8355	.4005	.6924	.8896
.208	.8355	.3952	.6878	.8872
.156	.8355	.3819	.6761	.8811
.104	.8355	.3632	.6594	.8719
.052	.8355	.3419	.6397	.8606
0.000	.8355	.3312	.6297	.8545
-.104	.8140	.3624	.6672	.8762
-.156	.8355	.3725	.6678	.8765
-.208	.8569	.3854	.6706	.8781
-.260	.8247	.3942	.6913	.8891
-.312	.8462	.3937	.6821	.8842
-.364	.8462	.3803	.6704	.8780
-.416	.8355	.3939	.6867	.8867
-.468	.8355	.4046	.6959	.8914
-.520	.8355	.4180	.7073	.8972
-.572	.8355	.4287	.7163	.9016
-.624	.8355	.4394	.7252	.9058
-.676	.8462	.4525	.7313	.9087
-.728	.8569	.4656	.7371	.9114
-.780	.8569	.4816	.7497	.9170
-.832	.8569	.4977	.7621	.9225
-.884	.8783	.5185	.7683	.9251
-.936	.8997	.5447	.7781	.9292
-.988	.9211	.5682	.7854	.9322
-1.040	.9426	.5971	.7959	.9364

(z) $x/D = 6.0$; $y/D = 0.0$; $\alpha = 0^{\circ}$;

$p_\infty = 1075.93$ N/m^2 (22.47 lb/ft^2);
$q_\infty = 11\ 751.09$ N/m^2 (245.43 lb/ft^2);
$p_{t,\infty} = 152\ 795.48$ N/m^2 (3191.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3056	.5451	.6462	.8643
.988	1.1023	.5209	.6874	.8870
.936	.8989	.5072	.7512	.9177
.884	.8882	.4889	.7419	.9135
.832	.8775	.4785	.7384	.9120
.780	.8668	.4655	.7328	.9094
.728	.8561	.4551	.7291	.9076
.676	.8561	.4471	.7227	.9046
.624	.8561	.4418	.7184	.9025
.572	.8561	.4365	.7140	.9005
.520	.8561	.4312	.7097	.8983
.468	.8347	.4237	.7125	.8997
.416	.8133	.4136	.7131	.9000
.364	.8133	.4030	.7039	.8954
.312	.8133	.3923	.6945	.8907
.260	.8133	.3790	.6826	.8845
.208	.8133	.3684	.6730	.8794
.156	.8026	.3580	.6679	.8766
.104	.7919	.3503	.6651	.8750
.052	.7919	.3423	.6574	.8708
0.000	.7919	.3396	.6549	.8693
-.104	.7919	.3412	.6564	.8702
-.156	.8133	.3487	.6548	.8693
-.208	.8347	.3589	.6557	.8698
-.260	.8133	.3728	.6770	.8815
-.312	.8347	.3829	.6773	.8817
-.364	.8240	.3939	.6914	.8891
-.416	.8347	.4043	.6960	.8915
-.468	.8240	.4126	.7076	.8973
-.520	.8133	.4182	.7171	.9019
-.572	.8133	.4235	.7216	.9041
-.624	.8133	.4289	.7262	.9063
-.676	.8133	.4342	.7307	.9084
-.728	.8133	.4422	.7374	.9115
-.780	.8240	.4500	.7390	.9122
-.832	.8347	.4577	.7405	.9129
-.884	.8454	.4708	.7463	.9155
-.936	.8561	.4866	.7539	.9189
-.988	.8668	.5050	.7633	.9230
-1.040	.8775	.5261	.7743	.9276

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(aa) x/D = 7.0; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 1076.07 N/m2 (22.47 lb/ft2);
q_∞ = 11 752.56 N/m2 (245.46 lb/ft2);
$p_{t,\infty}$ = 152 814.63 N/m2 (3191.60 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2837	.5409	.6491	.8660
.988	1.0805	.5166	.6915	.8892
.936	.8772	.5056	.7592	.9212
.884	.8665	.4872	.7499	.9171
.832	.8558	.4769	.7465	.9156
.780	.8558	.4662	.7381	.9118
.728	.8558	.4556	.7296	.9079
.676	.8558	.4476	.7232	.9049
.624	.8558	.4423	.7189	.9028
.572	.8451	.4372	.7192	.9030
.520	.8344	.4295	.7174	.9021
.468	.8237	.4244	.7178	.9023
.416	.8130	.4140	.7136	.9002
.364	.8130	.4034	.7044	.8957
.312	.8130	.3927	.6950	.8910
.260	.8130	.3794	.6831	.8848
.208	.8130	.3714	.6759	.8809
.156	.8023	.3584	.6683	.8768
.104	.7916	.3506	.6655	.8753
.052	.7916	.3453	.6605	.8725
0.000	.7916	.3400	.6554	.8696
-.104	.7916	.3443	.6595	.8719
-.156	.8130	.3491	.6553	.8696
-.208	.8344	.3593	.6562	.8701
-.260	.8130	.3732	.6775	.8818
-.312	.8344	.3807	.6754	.8807
-.364	.8237	.3943	.6919	.8894
-.416	.8344	.4021	.6942	.8905
-.468	.8237	.4103	.7058	.8964
-.520	.8130	.4160	.7153	.9011
-.572	.8130	.4213	.7199	.9033
-.624	.8130	.4267	.7244	.9054
-.676	.8130	.4320	.7289	.9076
-.728	.8130	.4400	.7357	.9107
-.780	.8023	.4483	.7475	.9161
-.832	.7916	.4566	.7594	.9213
-.884	.8130	.4667	.7577	.9206
-.936	.8344	.4823	.7602	.9217
-.988	.8344	.4956	.7707	.9261
-1.040	.8344	.5170	.7871	.9329

(bb) x/D = 8.0; y/D = 0.0; $\alpha = 0^o$;

p_∞ = 1073.17 N/m2 (22.41 lb/ft2);
q_∞ = 11 720.89 N/m2 (244.80 lb/ft2);
$p_{t,\infty}$ = 152 402.86 N/m2 (3183.00 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2657	.5422	.6545	.8691
.988	1.0619	.5232	.7019	.8945
.936	.8581	.5122	.7726	.9269
.884	.8796	.5090	.7607	.9219
.832	.9010	.5085	.7512	.9177
.780	.9225	.5186	.7498	.9171
.728	.9439	.5181	.7409	.9131
.676	1.0083	.5165	.7157	.9013
.624	1.0727	.5150	.6929	.8899
.572	1.1048	.5115	.6804	.8834
.520	1.1370	.5027	.6649	.8750
.468	1.1263	.4950	.6629	.8739
.416	1.1156	.4846	.6591	.8717
.364	1.1156	.4739	.6518	.8676
.312	1.1156	.4606	.6425	.8622
.260	1.0941	.4478	.6397	.8606
.208	1.0727	.4349	.6368	.8588
.156	1.0727	.4216	.6269	.8529
.104	1.0727	.4083	.6169	.8467
.052	1.0727	.4003	.6108	.8428
0.000	1.0727	.3976	.6088	.8415
-.104	1.0727	.3968	.6082	.8411
-.156	1.0727	.4048	.6143	.8450
-.208	1.0727	.4156	.6224	.8501
-.260	1.0619	.4292	.6358	.8582
-.312	1.0619	.4399	.6437	.8629
-.364	1.0619	.4533	.6534	.8685
-.416	1.0512	.4697	.6684	.8769
-.468	1.0512	.4777	.6741	.8800
-.520	1.0512	.4884	.6816	.8840
-.572	1.0512	.4938	.6854	.8860
-.624	1.0512	.4965	.6872	.8869
-.676	1.0190	.5026	.7023	.8947
-.728	.9869	.5007	.7123	.8996
-.780	.9225	.4943	.7320	.9090
-.832	.8581	.4878	.7539	.9189
-.884	.8367	.4776	.7555	.9196
-.936	.8152	.4835	.7701	.9259
-.988	.8260	.4966	.7754	.9281
-1.040	.8367	.5151	.7846	.9319

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(cc) $x/D = 8.39$; $y/D = 3.0$; $\alpha = 0^o$;

$p_\infty = 1073.03$ N/m^2 (22.41 lb/ft^2);
$q_\infty = 11\ 719.42$ N/m^2 (244.77 lb/ft^2);
$p_{t,\infty} = 152\ 383.71$ N/m^2 (3182.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3514	.9774	.8505	.9566
.988	1.1476	.9796	.9239	.9798
.936	.9438	.9818	1.0199	1.0047
.884	.9331	.9767	1.0231	1.0055
.832	.9224	.9717	1.0264	1.0062
.780	.9117	.9719	1.0325	1.0076
.728	.9009	.9642	1.0345	1.0081
.676	.8902	.9618	1.0394	1.0092
.624	.8795	.9593	1.0444	1.0103
.572	.8902	.9591	1.0380	1.0088
.520	.9009	.9562	1.0302	1.0071
.468	.8902	.9538	1.0351	1.0082
.416	.8795	.9514	1.0401	1.0093
.364	.8795	.9460	1.0371	1.0086
.312	.8795	.9460	1.0371	1.0086
.260	.8688	.9436	1.0422	1.0098
.208	.8580	.9439	1.0488	1.0112
.156	.8580	.9439	1.0488	1.0112
.104	.8580	.9412	1.0473	1.0109
.052	.8580	.9385	1.0459	1.0106
0.000	.8580	.9385	1.0459	1.0106
-.104	.8580	.9348	1.0438	1.0101
-.156	.8688	.9345	1.0372	1.0087
-.208	.8795	.9343	1.0307	1.0072
-.260	.8580	.9348	1.0438	1.0101
-.312	.8688	.9345	1.0372	1.0087
-.364	.8580	.9348	1.0438	1.0101
-.416	.8580	.9348	1.0438	1.0101
-.468	.8473	.9350	1.0505	1.0116
-.520	.8366	.9380	1.0589	1.0134
-.572	.8473	.9377	1.0520	1.0119
-.624	.8580	.9428	1.0482	1.0111
-.676	.8580	.9455	1.0497	1.0114
-.728	.8580	.9482	1.0512	1.0117
-.780	.8688	.9506	1.0460	1.0106
-.832	.8795	.9530	1.0410	1.0095
-.884	.8902	.9608	1.0389	1.0090
-.936	.9009	.9632	1.0340	1.0079
-.988	.9224	.9654	1.0230	1.0054
-1.040	.9438	.9675	1.0125	1.0030

(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^o$;

$p_\infty = 1073.03$ N/m^2 (22.41 lb/ft^2);
$q_\infty = 11\ 719.42$ N/m^2 (244.77 lb/ft^2);
$p_{t,\infty} = 152\ 383.71$ N/m^2 (3182.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3953	.9737	.8354	.9513
.988	1.1914	.9759	.9051	.9742
.936	.9874	.9728	.9926	.9982
.884	.9767	.9677	.9954	.9989
.832	.9660	.9626	.9983	.9996
.780	.9552	.9602	1.0026	1.0006
.728	.9445	.9525	1.0042	1.0010
.676	.9338	.9448	1.0059	1.0014
.624	.9230	.9423	1.0104	1.0025
.572	.9338	.9368	1.0016	1.0004
.520	.9445	.9338	.9943	.9986
.468	.9338	.9314	.9987	.9997
.416	.9230	.9290	1.0032	1.0008
.364	.9230	.9237	1.0004	1.0001
.312	.9230	.9237	1.0004	1.0001
.260	.9230	.9184	.9975	.9994
.208	.9230	.9184	.9975	.9994
.156	.9123	.9160	1.0020	1.0005
.104	.9016	.9136	1.0066	1.0016
.052	.9123	.9133	1.0005	1.0001
0.000	.9230	.9130	.9946	.9987
-.104	.9016	.9070	1.0030	1.0007
-.156	.9230	.9092	.9925	.9982
-.208	.9445	.9087	.9808	.9952
-.260	.9016	.9097	1.0045	1.0011
-.312	.9230	.9092	.9925	.9982
-.364	.9123	.9121	.9999	1.0000
-.416	.9016	.9124	1.0060	1.0014
-.468	.8908	.9180	1.0151	1.0036
-.520	.8801	.9209	1.0229	1.0054
-.572	.9016	.9204	1.0104	1.0025
-.624	.9230	.9279	1.0026	1.0006
-.676	.9230	.9333	1.0055	1.0013
-.728	.9230	.9386	1.0084	1.0020
-.780	.9230	.9413	1.0098	1.0024
-.832	.9230	.9440	1.0113	1.0027
-.884	.9445	.9461	1.0009	1.0002
-.936	.9660	.9536	.9936	.9984
-.988	.9767	.9561	.9894	.9974
-1.040	.9874	.9585	.9852	.9964

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^\circ$;

$p_\infty = 1073.54$ N/m2 (22.42 lb/ft2);
$q_\infty = 11\ 724.94$ N/m2 (244.88 lb/ft2);
$p_{t,\infty} = 152\ 455.53$ N/m2 (3184.10 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3293	.8736	.8107	.9421
.988	1.1256	.8652	.8767	.9654
.936	.9220	.8594	.9655	.9913
.884	.9112	.8516	.9667	.9916
.832	.9005	.8439	.9681	.9920
.780	.8898	.8362	.9694	.9923
.728	.8791	.8258	.9692	.9923
.676	.8684	.8181	.9706	.9926
.624	.8576	.8103	.9720	.9930
.572	.8684	.8021	.9611	.9901
.520	.8791	.7965	.9519	.9877
.468	.8684	.7888	.9531	.9880
.416	.8576	.7837	.9559	.9887
.364	.8576	.7757	.9510	.9874
.312	.8576	.7704	.9478	.9865
.260	.8576	.7651	.9445	.9856
.208	.8576	.7597	.9412	.9847
.156	.8576	.7571	.9395	.9843
.104	.8576	.7517	.9362	.9833
.052	.8576	.7517	.9362	.9833
0.000	.8576	.7517	.9362	.9833
-.104	.8576	.7498	.9350	.9830
-.156	.8684	.7496	.9291	.9813
-.208	.8791	.7493	.9233	.9796
-.260	.8576	.7525	.9367	.9835
-.312	.8684	.7576	.9341	.9827
-.364	.8576	.7579	.9400	.9844
-.416	.8576	.7605	.9417	.9849
-.468	.8469	.7715	.9544	.9883
-.520	.8362	.7771	.9640	.9909
-.572	.8469	.7822	.9610	.9901
-.624	.8576	.7900	.9597	.9898
-.676	.8576	.7953	.9630	.9906
-.728	.8576	.8060	.9694	.9923
-.780	.8576	.8113	.9726	.9931
-.832	.8576	.8167	.9758	.9940
-.884	.8684	.8245	.9744	.9936
-.936	.8791	.8349	.9746	.9936
-.988	.8898	.8400	.9716	.9929
-1.040	.9005	.8478	.9703	.9925

(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^\circ$;

$p_\infty = 1074.11$ N/m2 (22.43 lb/ft2);
$q_\infty = 11\ 731.20$ N/m2 (245.01 lb/ft2);
$p_{t,\infty} = 152\ 536.93$ N/m2 (3185.80 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2861	.7286	.7527	.9184
.988	1.0824	.7122	.8111	.9423
.936	.8788	.7037	.8949	.9711
.884	.8681	.6853	.8885	.9691
.832	.8574	.6696	.8837	.9676
.780	.8574	.6510	.8713	.9636
.728	.8574	.6323	.8588	.9594
.676	.8574	.6163	.8478	.9557
.624	.8574	.6003	.8368	.9518
.572	.8574	.5897	.8293	.9491
.520	.8574	.5763	.8199	.9456
.468	.8467	.5633	.8157	.9440
.416	.8359	.5529	.8133	.9431
.364	.8467	.5393	.7981	.9373
.312	.8574	.5310	.7870	.9329
.260	.8467	.5233	.7862	.9325
.208	.8359	.5182	.7874	.9330
.156	.8359	.5129	.7833	.9313
.104	.8359	.5102	.7813	.9305
.052	.8359	.5076	.7792	.9297
0.000	.8359	.5076	.7792	.9297
-.104	.8359	.5019	.7748	.9279
-.156	.8467	.5016	.7697	.9257
-.208	.8574	.5040	.7667	.9245
-.260	.8359	.5072	.7790	.9296
-.312	.8467	.5150	.7799	.9300
-.364	.8359	.5180	.7871	.9329
-.416	.8359	.5287	.7952	.9361
-.468	.8252	.5396	.8087	.9414
-.520	.8145	.5479	.8202	.9457
-.572	.8145	.5613	.8301	.9494
-.624	.8145	.5747	.8400	.9529
-.676	.8145	.5881	.8497	.9563
-.728	.8145	.6014	.8593	.9596
-.780	.8145	.6175	.8707	.9634
-.832	.8145	.6336	.8820	.9670
-.884	.8252	.6494	.8871	.9687
-.936	.8359	.6678	.8938	.9708
-.988	.8467	.6810	.8968	.9717
-1.040	.8574	.6994	.9032	.9737

TABLE 4.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^o$;

$p_\infty = 1074.15$ N/m² (22.43 lb/ft²);
$q_\infty = 11\ 731.57$ N/m² (245.02 lb/ft²);
$p_{t,\infty} = 152\ 541.71$ N/m² (3185.90 lb/ft²)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.2866	.6824	.7283	.9073
.988	1.0829	.6607	.7811	.9305
.936	.8792	.6470	.8579	.9591
.884	.8685	.6260	.8490	.9561
.832	.8577	.6076	.8416	.9535
.780	.8577	.5890	.8286	.9488
.728	.8577	.5677	.8135	.9432
.676	.8577	.5517	.8020	.9388
.624	.8577	.5357	.7903	.9342
.572	.8577	.5224	.7804	.9302
.520	.8577	.5118	.7724	.9269
.468	.8470	.5014	.7694	.9256
.416	.8363	.4910	.7662	.9242
.364	.8363	.4830	.7600	.9215
.312	.8363	.4777	.7558	.9197
.260	.8363	.4723	.7515	.9179
.208	.8363	.4697	.7494	.9169
.156	.8363	.4644	.7451	.9150
.104	.8363	.4617	.7430	.9140
.052	.8363	.4590	.7409	.9131
0.000	.8363	.4590	.7409	.9131
-.104	.8363	.4537	.7365	.9111
-.156	.8470	.4561	.7338	.9098
-.208	.8577	.4558	.7290	.9076
-.260	.8363	.4563	.7387	.9121
-.312	.8470	.4588	.7359	.9108
-.364	.8363	.4617	.7430	.9140
-.416	.8363	.4697	.7495	.9169
-.468	.8256	.4780	.7609	.9220
-.520	.8149	.4836	.7704	.9260
-.572	.8149	.4944	.7789	.9295
-.624	.8149	.5077	.7894	.9338
-.676	.8149	.5184	.7976	.9371
-.728	.8149	.5345	.8099	.9418
-.780	.8149	.5479	.8200	.9456
-.832	.8149	.5666	.8339	.9507
-.884	.8256	.5905	.8457	.9549
-.936	.8363	.6089	.8533	.9576
-.988	.8470	.6274	.8607	.9601
-1.040	.8577	.6459	.8678	.9624

(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^o$;

$p_\infty = 1073.98$ N/m² (22.43 lb/ft²);
$q_\infty = 11\ 729.73$ N/m² (244.98 lb/ft²);
$p_{t,\infty} = 152\ 517.77$ N/m² (3185.40 lb/ft²)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.2654	.6218	.7010	.8940
.988	1.0724	.5999	.7479	.9163
.936	.8793	.5832	.8144	.9436
.884	.8686	.5595	.8026	.9390
.832	.8579	.5411	.7942	.9357
.780	.8579	.5225	.7804	.9302
.728	.8579	.5065	.7684	.9252
.676	.8579	.4932	.7582	.9208
.624	.8579	.4799	.7479	.9163
.572	.8579	.4719	.7417	.9134
.520	.8579	.4639	.7354	.9106
.468	.8472	.4562	.7338	.9098
.416	.8364	.4484	.7322	.9091
.364	.8364	.4431	.7279	.9071
.312	.8364	.4378	.7235	.9050
.260	.8364	.4325	.7190	.9029
.208	.8364	.4271	.7146	.9007
.156	.8364	.4191	.7079	.8974
.104	.8364	.4165	.7056	.8963
.052	.8364	.4138	.7034	.8952
0.000	.8364	.4111	.7011	.8941
-.104	.8150	.4109	.7101	.8985
-.156	.8257	.4133	.7075	.8973
-.208	.8364	.4157	.7050	.8960
-.260	.8257	.4187	.7121	.8995
-.312	.8364	.4238	.7118	.8994
-.364	.8257	.4294	.7211	.9039
-.416	.8364	.4345	.7207	.9037
-.468	.8257	.4374	.7278	.9071
-.520	.8150	.4430	.7373	.9114
-.572	.8150	.4511	.7439	.9145
-.624	.8150	.4591	.7505	.9174
-.676	.8150	.4671	.7571	.9203
-.728	.8150	.4805	.7678	.9249
-.780	.8150	.4912	.7763	.9285
-.832	.8150	.5046	.7868	.9328
-.884	.8257	.5230	.7959	.9364
-.936	.8364	.5468	.8086	.9413
-.988	.8364	.5629	.8203	.9458
-1.040	.8364	.5869	.8377	.9521

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(ii) x/D = 8.39; y/D = 0.42; $\alpha = 0^o$;

p_∞ = 1073.84 N/m2 (22.43 lb/ft2);
q_∞ = 11 728.26 N/m2 (244.95 lb/ft2);
$p_{t,\infty}$ = 152 498.62 N/m2 (3185.00 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2870	.5760	.6690	.8772
.988	1.0832	.5517	.7137	.9003
.936	.8794	.5327	.7783	.9293
.884	.8687	.5116	.7674	.9248
.832	.8580	.4959	.7603	.9217
.780	.8473	.4829	.7549	.9194
.728	.8365	.4671	.7473	.9160
.676	.8365	.4592	.7409	.9131
.624	.8365	.4485	.7322	.9091
.572	.8473	.4429	.7230	.9048
.520	.8580	.4373	.7139	.9004
.468	.8473	.4323	.7143	.9006
.416	.8365	.4272	.7146	.9007
.364	.8473	.4216	.7054	.8962
.312	.8580	.4160	.6963	.8916
.260	.8687	.4131	.6896	.8882
.208	.8794	.4048	.6785	.8823
.156	.9116	.4014	.6635	.8742
.104	.9438	.3926	.6449	.8636
.052	.9438	.3899	.6427	.8623
0.000	.9438	.3899	.6427	.8623
-.104	.9438	.3917	.6443	.8632
-.156	.9223	.3923	.6521	.8678
-.208	.9009	.4008	.6670	.8761
-.260	.8902	.4038	.6735	.8797
-.312	.8687	.4043	.6822	.8843
-.364	.8580	.4099	.6912	.8890
-.416	.8365	.4104	.7005	.8937
-.468	.8258	.4161	.7098	.8984
-.520	.8151	.4217	.7193	.9030
-.572	.8151	.4270	.7238	.9052
-.624	.8151	.4351	.7306	.9083
-.676	.8151	.4404	.7351	.9104
-.728	.8151	.4511	.7439	.9145
-.780	.8151	.4591	.7505	.9174
-.832	.8151	.4698	.7592	.9212
-.884	.8258	.4856	.7669	.9245
-.936	.8365	.4987	.7721	.9267
-.988	.8365	.5175	.7865	.9327
-1.040	.8365	.5415	.8046	.9398

(jj) x/D = 8.39; y/D = 0.21; $\alpha = 0^o$;

p_∞ = 1075.02 N/m2 (22.45 lb/ft2);
q_∞ = 11 741.14 N/m2 (245.22 lb/ft2);
$p_{t,\infty}$ = 152 666.20 N/m2 (3188.50 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2639	.5473	.6580	.8711
.988	1.0604	.5256	.7041	.8955
.936	.8569	.5066	.7689	.9254
.884	.8569	.4933	.7588	.9210
.832	.8569	.4880	.7546	.9192
.780	.8783	.4875	.7450	.9149
.728	.8997	.4896	.7377	.9116
.676	.9532	.5016	.7254	.9059
.624	1.0068	.4976	.7030	.8950
.572	1.0604	.4937	.6823	.8844
.520	1.1139	.4843	.6594	.8719
.468	1.1139	.4763	.6539	.8688
.416	1.1139	.4657	.6466	.8646
.364	1.1032	.4526	.6405	.8610
.312	1.0925	.4395	.6343	.8573
.260	1.0818	.4238	.6259	.8523
.208	1.0711	.4107	.6193	.8481
.156	1.0711	.3974	.6091	.8417
.104	1.0711	.3867	.6009	.8364
.052	1.0711	.3841	.5988	.8350
0.000	1.0711	.3841	.5988	.8350
-.104	1.0496	.3833	.6043	.8386
-.156	1.0604	.3857	.6031	.8379
-.208	1.0711	.3988	.6102	.8424
-.260	1.0496	.4127	.6271	.8530
-.312	1.0604	.4258	.6337	.8570
-.364	1.0496	.4422	.6490	.8660
-.416	1.0496	.4529	.6568	.8705
-.468	1.0389	.4638	.6682	.8768
-.520	1.0282	.4721	.6776	.8819
-.572	1.0282	.4775	.6814	.8839
-.624	1.0282	.4775	.6814	.8839
-.676	.9747	.4734	.6969	.8920
-.728	.9211	.4640	.7098	.8984
-.780	.8783	.4597	.7235	.9050
-.832	.8354	.4608	.7427	.9139
-.884	.8354	.4688	.7491	.9168
-.936	.8354	.4822	.7597	.9214
-.988	.8354	.5036	.7764	.9285
-1.040	.8354	.5249	.7927	.9351

TABLE 4.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D IN THE WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(kk) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 0^o$;

$p_\infty = 1074.48\ N/m^2$ ($22.44\ lb/ft^2$);
$q_\infty = 11\ 735.25\ N/m^2$ ($245.10\ lb/ft^2$);
$p_{t,\infty} = 152\ 589.59\ N/m^2$ ($3186.90\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4359	.6313	.6631	.8739
.988	1.2859	.6217	.6953	.8911
.936	1.1359	.5987	.7260	.9062
.884	1.1359	.5774	.7130	.8999
.832	1.1359	.5614	.7030	.8950
.780	1.1252	.5457	.6964	.8917
.728	1.1145	.5326	.6913	.8891
.676	1.1145	.5246	.6861	.8863
.624	1.1145	.5113	.6773	.8817
.572	1.1252	.5057	.6704	.8780
.520	1.1359	.4974	.6617	.8732
.468	1.1252	.4897	.6597	.8720
.416	1.1145	.4793	.6558	.8698
.364	1.1037	.4662	.6499	.8665
.312	1.0930	.4584	.6476	.8652
.260	1.0823	.4454	.6415	.8616
.208	1.0716	.4350	.6371	.8590
.156	1.0716	.4216	.6273	.8531
.104	1.0716	.4109	.6193	.8481
.052	1.0716	.4029	.6132	.8443
0.000	1.0716	.3949	.6071	.8404
-.104	1.0716	.3963	.6082	.8411
-.156	1.0716	.4044	.6143	.8450
-.208	1.0716	.4178	.6244	.8513
-.260	1.0609	.4287	.6357	.8582
-.312	1.0609	.4394	.6436	.8628
-.364	1.0502	.4504	.6549	.8694
-.416	1.0502	.4638	.6646	.8748
-.468	1.0395	.4748	.6758	.8809
-.520	1.0287	.4831	.6852	.8859
-.572	1.0502	.4906	.6835	.8850
-.624	1.0716	.4954	.6799	.8831
-.676	1.0823	.5031	.6818	.8841
-.728	1.0930	.5109	.6837	.8851
-.780	1.0823	.5192	.6926	.8897
-.832	1.0716	.5328	.7051	.8961
-.884	1.0930	.5484	.7083	.8976
-.936	1.1145	.5666	.7130	.9000
-.988	1.0716	.5810	.7363	.9110
-1.040	1.0287	.5847	.7539	.9189

(ll) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^o$;

$p_\infty = 1074.08\ N/m^2$ ($22.43\ lb/ft^2$);
$q_\infty = 11\ 730.83\ N/m^2$ ($245.00\ lb/ft^2$);
$p_{t,\infty} = 152\ 532.14\ N/m^2$ ($3185.70\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.5437	.6876	.6674	.8763
.988	1.3400	.6580	.7007	.8939
.936	1.1363	.6309	.7451	.9150
.884	1.1256	.5965	.7280	.9071
.832	1.1149	.5781	.7201	.9034
.780	1.0934	.5547	.7122	.8996
.728	1.0720	.5365	.7074	.8972
.676	1.0720	.5152	.6932	.8901
.624	1.0720	.4992	.6824	.8844
.572	1.0934	.4853	.6662	.8757
.520	1.1149	.4688	.6484	.8656
.468	1.0934	.4479	.6400	.8607
.416	1.0720	.4405	.6410	.8613
.364	1.0720	.4591	.6544	.8691
.312	1.0720	.4671	.6601	.8723
.260	1.0613	.4594	.6579	.8711
.208	1.0506	.4570	.6596	.8720
.156	1.0613	.4461	.6483	.8656
.104	1.0720	.4244	.6292	.8543
.052	1.0613	.3980	.6124	.8438
0.000	1.0506	.3849	.6053	.8393
-.104	1.0506	.3948	.6130	.8442
-.156	1.0506	.4189	.6315	.8556
-.208	1.0506	.4377	.6455	.8639
-.260	1.0398	.4460	.6549	.8694
-.312	1.0398	.4487	.6569	.8705
-.364	1.0398	.4567	.6628	.8738
-.416	1.0291	.4409	.6546	.8692
-.468	1.0291	.4302	.6466	.8646
-.520	1.0291	.4463	.6585	.8714
-.572	1.0506	.4645	.6650	.8750
-.624	1.0720	.4801	.6692	.8773
-.676	1.0827	.4959	.6768	.8814
-.728	1.0934	.5144	.6859	.8862
-.780	1.0827	.5307	.7001	.8936
-.832	1.0720	.5497	.7161	.9015
-.884	1.0934	.5706	.7224	.9045
-.936	1.1149	.5996	.7333	.9096
-.988	1.1363	.6258	.7421	.9136
-1.040	1.1578	.6575	.7536	.9188

TABLE 5.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) x/D = 1.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 569.80 N/m^2 (220.75 lb/ft^2);
q_∞ = 18 941.09 N/m^2 (395.59 lb/ft^2);
$p_{t,\infty}$ = 44 926.05 N/m^2 (938.30 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	.7347	.8918	1.1017	1.0639
.988	.7250	.8917	1.1091	1.0682
.936	.7152	.8767	1.1072	1.0671
.884	.6968	.8764	1.1215	1.0756
.832	.6784	.8629	1.1278	1.0792
.780	.6513	.8441	1.1384	1.0853
.728	.6242	.8286	1.1522	1.0932
.676	.5982	.5816	.9860	.9907
.624	.5722	.1902	.5766	.6554
.572	.5613	.0444	.2813	.3390
.520	.5505	.0132	.1550	.1894
.468	.5451	.0103	.1373	.1680
.416	.5397	.0103	.1380	.1688
.364	.5440	.0079	.1205	.1477
.312	.5483	.0055	.1004	.1231
.260	.5527	.0031	.0753	.0924
.208	.5570	.0007	.0360	.0443
.156	.5635	0.0000	0.0000	0.0000
.104	.5678	0.0000	0.0000	0.0000
.052	.5678	0.0000	0.0000	0.0000
0.000	.5787	0.0000	0.0000	0.0000
-.052	.5787	0.0000	0.0000	0.0000
-.104	.5787	0.0000	0.0000	0.0000
-.156	.5776	.0003	.0212	.0260
-.208	.5765	.0009	.0387	.0475
-.260	.5776	.0003	.0212	.0260
-.312	.5787	0.0000	0.0000	0.0000
-.364	.5798	.0021	.0596	.0732
-.416	.5808	.0133	.1514	.1851
-.468	.5895	.0773	.3622	.4311
-.520	.5982	.3056	.7148	.7825
-.572	.6101	.7749	1.1270	1.0787
-.624	.6220	.8457	1.1660	1.1009
-.676	.6383	.8530	1.1560	1.0953
-.728	.6545	.8603	1.1464	1.0899
-.780	.6762	.8617	1.1288	1.0798
-.832	.6979	.8664	1.1142	1.0713
-.884	.7098	.8743	1.1099	1.0687
-.936	.7217	.8922	1.1119	1.0699
-.988	.7391	.8943	1.1000	1.0629
-1.040	.7564	.9030	1.0926	1.0584

(b) x/D = 1.5; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 635.14 N/m^2 (222.12 lb/ft^2);
q_∞ = 19 058.17 N/m^2 (398.04 lb/ft^2);
$p_{t,\infty}$ = 45 203.75 N/m^2 (944.10 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	.9144	.9520	1.0204	1.0133
.988	.9197	.9327	1.0070	1.0046
.936	.9251	.9202	.9973	.9982
.884	.8778	.9133	1.0201	1.0131
.832	.8305	.9065	1.0448	1.0289
.780	.7713	.8916	1.0752	1.0478
.728	.7121	.8750	1.1085	1.0679
.676	.6799	.7727	1.0661	1.0423
.624	.6476	.4539	.8372	.8831
.572	.6304	.2405	.6176	.6946
.520	.6132	.0916	.3866	.4581
.468	.6153	.0178	.1703	.2078
.416	.6175	0.0000	0.0000	0.0000
.364	.6175	0.0000	0.0000	0.0000
.312	.6175	0.0000	0.0000	0.0000
.260	.6175	0.0000	0.0000	0.0000
.208	.6175	0.0000	0.0000	0.0000
.156	.6232	0.0000	0.0000	0.0000
.104	.6282	0.0000	0.0000	0.0000
.052	.6218	0.0000	0.0000	0.0000
0.000	.6390	0.0000	0.0000	0.0000
-.052	.6325	0.0000	0.0000	0.0000
-.104	.6261	0.0000	0.0000	0.0000
-.156	.6325	0.0000	0.0000	0.0000
-.208	.6390	.0030	.0681	.0836
-.260	.6422	.0130	.1422	.1740
-.312	.6454	.0534	.2877	.3465
-.364	.6551	.1005	.3918	.4639
-.416	.6648	.2494	.6125	.6898
-.468	.6723	.4999	.8623	.9024
-.520	.6799	.8106	1.0919	1.0580
-.572	.7078	.8768	1.1130	1.0705
-.624	.7358	.8886	1.0989	1.0622
-.676	.7874	.8898	1.0630	1.0404
-.728	.8391	.8959	1.0333	1.0217
-.780	.8681	.9075	1.0224	1.0147
-.832	.8971	.9190	1.0121	1.0080
-.884	.9015	.9299	1.0156	1.0103
-.936	.9058	.9473	1.0227	1.0148
-.988	.8423	.9581	1.0665	1.0425
-1.040	.7788	.9539	1.1067	1.0668

TABLE 5.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 10\ 596.84\ N/m^2$ ($221.32\ lb/ft^2$);
$q_\infty = 18\ 989.54\ N/m^2$ ($396.60\ lb/ft^2$);
$p_{t,\infty} = 45\ 040.96\ N/m^2$ ($940.70\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7414	.9003	1.1019	1.0640
.988	.7360	.9028	1.1075	1.0673
.936	.7306	.8905	1.1040	1.0652
.884	.7274	.8877	1.1047	1.0657
.832	.7241	.8998	1.1147	1.0716
.780	.7522	.8918	1.0888	1.0562
.728	.7803	.8905	1.0682	1.0436
.676	.7901	.8805	1.0557	1.0358
.624	.7998	.8107	1.0068	1.0045
.572	.7890	.5695	.8496	.8927
.520	.7782	.3727	.6920	.7626
.468	.7782	.1796	.4804	.5586
.416	.7782	.0490	.2509	.3037
.364	.7749	.0105	.1165	.1428
.312	.7717	0.0000	0.0000	0.0000
.260	.7749	0.0000	0.0000	0.0000
.208	.7782	0.0000	0.0000	0.0000
.156	.7944	0.0000	0.0000	0.0000
.104	.7976	0.0000	0.0000	0.0000
.052	.8020	0.0000	0.0000	0.0000
0.000	.8171	.0111	.1166	.1428
-.052	.8214	.0373	.2130	.2590
-.104	.8257	.0463	.2368	.2871
-.156	.8452	.0530	.2505	.3032
-.208	.8646	.0841	.3120	.3744
-.260	.8646	.1503	.4170	.4913
-.312	.8646	.2979	.5870	.6654
-.364	.8473	.4903	.7607	.8215
-.416	.8301	.8294	.9996	.9997
-.468	.8128	.9071	1.0564	1.0363
-.520	.7955	.9000	1.0637	1.0408
-.572	.7749	.8969	1.0758	1.0482
-.624	.7544	.9003	1.0924	1.0583
-.676	.7468	.8966	1.0957	1.0603
-.728	.7393	.8978	1.1020	1.0641
-.780	.7425	.8841	1.0912	1.0576
-.832	.7458	.8935	1.0946	1.0596
-.884	.7533	.9021	1.0943	1.0595
-.936	.7609	.9108	1.0941	1.0593
-.988	.7857	.9066	1.0742	1.0472
-1.040	.8106	.9091	1.0590	1.0379

(d) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 10\ 604.72\ N/m^2$ ($221.48\ lb/ft^2$);
$q_\infty = 19\ 003.67\ N/m^2$ ($396.90\ lb/ft^2$);
$p_{t,\infty} = 45\ 074.47\ N/m^2$ ($941.40\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7460	.9110	1.1050	1.0659
.988	.7990	.9220	1.0742	1.0473
.936	.8520	.9164	1.0371	1.0241
.884	.8866	.9188	1.0180	1.0118
.832	.9212	.9212	1.0000	1.0000
.780	.9569	.9216	.9814	.9876
.728	.9925	.9187	.9621	.9744
.676	1.0163	.9094	.9460	.9633
.624	1.0401	.8716	.9154	.9416
.572	1.0412	.8023	.8778	.9140
.520	1.0423	.6848	.8106	.8622
.468	1.0282	.5369	.7226	.7893
.416	1.0142	.3982	.6266	.7031
.364	1.0098	.2667	.5139	.5931
.312	1.0055	.2393	.4878	.5664
.260	1.0088	.2080	.4541	.5311
.208	1.0120	.2368	.4837	.5621
.156	1.0704	.2684	.5007	.5796
.104	1.0736	.3257	.5508	.6301
.052	1.0747	.2954	.5243	.6036
0.000	1.1353	.3446	.5510	.6303
-.052	1.1363	.3355	.5434	.6227
-.104	1.1374	.3457	.5513	.6306
-.156	1.1482	.3994	.5898	.6682
-.208	1.1590	.5342	.6789	.7509
-.260	1.1407	.7613	.8169	.8672
-.312	1.1223	.8916	.8913	.9241
-.364	1.1071	.9263	.9147	.9411
-.416	1.0920	.9257	.9207	.9454
-.468	1.0542	.9308	.9397	.9589
-.520	1.0163	.9309	.9570	.9710
-.572	.9752	.9248	.9738	.9824
-.624	.9342	.9303	.9979	.9986
-.676	.9082	.9298	1.0118	1.0078
-.728	.8823	.9210	1.0217	1.0142
-.780	.8390	.9167	1.0453	1.0293
-.832	.7958	.9075	1.0679	1.0434
-.884	.7774	.9139	1.0842	1.0534
-.936	.7590	.9203	1.1011	1.0635
-.988	.7341	.9178	1.1181	1.0736
-1.040	.7093	.9103	1.1329	1.0822

TABLE 5.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.41 $\times 10^6$ PER METER (1.65×10^6 PER FOOT) – Continued

(e) x/D = 3.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 617.12 N/m^2 (221.74 lb/ft^2);
q_∞ = 19 025.87 N/m^2 (397.36 lb/ft^2);
$p_{t,\infty}$ = 45 127.14 N/m^2 (942.50 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	.9428	.9390	.9980	.9987
.988	.9827	.9438	.9800	.9866
.936	1.0226	.9351	.9562	.9704
.884	1.0464	.9375	.9466	.9637
.832	1.0701	.9316	.9330	.9542
.780	1.0852	.9255	.9235	.9474
.728	1.1003	.9144	.9116	.9389
.676	1.1208	.8803	.8862	.9203
.624	1.1413	.8324	.8540	.8961
.572	1.1596	.7744	.8172	.8674
.520	1.1780	.7072	.7748	.8332
.468	1.1715	.5806	.7040	.7731
.416	1.1650	.5062	.6592	.7331
.364	1.1607	.4625	.6312	.7074
.312	1.1564	.4446	.6200	.6969
.260	1.1640	.4673	.6336	.7096
.208	1.1715	.4897	.6465	.7215
.156	1.2168	.5039	.6435	.7188
.104	1.2244	.4963	.6367	.7124
.052	1.2201	.5012	.6409	.7164
0.000	1.2772	.5254	.6414	.7168
-.052	1.2729	.5311	.6459	.7210
-.104	1.2686	.5761	.6739	.7464
-.156	1.2708	.6505	.7155	.7831
-.208	1.2729	.7837	.7846	.8413
-.260	1.2254	.8730	.8440	.8884
-.312	1.1780	.9106	.8792	.9151
-.364	1.1521	.9221	.8947	.9265
-.416	1.1262	.9236	.9056	.9345
-.468	1.1057	.9306	.9174	.9431
-.520	1.0852	.9293	.9254	.9488
-.572	1.0701	.9321	.9333	.9544
-.624	1.0550	.9314	.9396	.9588
-.676	1.0507	.9322	.9419	.9604
-.728	1.0464	.9247	.9400	.9591
-.780	1.0226	.9339	.9556	.9700
-.832	.9989	.9331	.9665	.9775
-.884	.9676	.9402	.9857	.9905
-.936	.9363	.9440	1.0041	1.0027
-.988	.8803	.9437	1.0354	1.0230
-1.040	.8242	.9367	1.0661	1.0423

(f) x/D = 4.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 623.88 N/m^2 (221.88 lb/ft^2);
q_∞ = 19 037.98 N/m^2 (397.62 lb/ft^2);
$p_{t,\infty}$ = 45 155.87 N/m^2 (943.10 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.1147	.9501	.9232	.9472
.988	1.1212	.9405	.9159	.9420
.936	1.1276	.9377	.9119	.9391
.884	1.1266	.9295	.9083	.9365
.832	1.1255	.9196	.9039	.9333
.780	1.1104	.9106	.9056	.9345
.728	1.0953	.8814	.8971	.9283
.676	1.1061	.8423	.8727	.9102
.624	1.1169	.7980	.8453	.8894
.572	1.1169	.7419	.8150	.8657
.520	1.1169	.7419	.8150	.8657
.468	1.1028	.6899	.7909	.8464
.416	1.0888	.6824	.7917	.8470
.364	1.0856	.6814	.7922	.8475
.312	1.0824	.6940	.8008	.8543
.260	1.0770	.7037	.8083	.8604
.208	1.0716	.7064	.8119	.8633
.156	1.0942	.6745	.7851	.8417
.104	1.0888	.6670	.7827	.8397
.052	1.0856	.6762	.7892	.8450
0.000	1.1061	.7064	.7992	.8530
-.052	1.1028	.7353	.8165	.8669
-.104	1.0996	.7935	.8495	.8926
-.156	1.1276	.8168	.8511	.8938
-.208	1.1557	.8485	.8569	.8982
-.260	1.1492	.8817	.8759	.9126
-.312	1.1427	.9014	.8881	.9217
-.364	1.1417	.9150	.8952	.9269
-.416	1.1406	.9202	.8982	.9291
-.468	1.1417	.9267	.9010	.9311
-.520	1.1427	.9248	.8996	.9301
-.572	1.1427	.9282	.9012	.9313
-.624	1.1427	.9282	.9012	.9313
-.676	1.1427	.9282	.9012	.9313
-.728	1.1427	.9349	.9045	.9337
-.780	1.1438	.9330	.9032	.9327
-.832	1.1449	.9412	.9067	.9353
-.884	1.1470	.9408	.9056	.9345
-.936	1.1492	.9521	.9102	.9378
-.988	1.1492	.9521	.9102	.9378
-1.040	1.1492	.9554	.9118	.9390

TABLE 5.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(g) $x/D = 5.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

p_∞ = 10 629.51 N/m^2 (222.00 lb/ft^2);
q_∞ = 19 048.08 N/m^2 (397.83 lb/ft^2);
$p_{t,\infty}$ = 45 179.81 N/m^2 (943.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0408	.9372	.9489	.9653
.988	1.0452	.9348	.9457	.9631
.936	1.0495	.9239	.9383	.9579
.884	1.0387	.9125	.9373	.9572
.832	1.0279	.8993	.9354	.9558
.780	1.0096	.8875	.9376	.9574
.728	.9913	.8607	.9318	.9533
.676	.9999	.8340	.9133	.9401
.624	1.0085	.7987	.8899	.9230
.572	1.0064	.7705	.8750	.9119
.520	1.0042	.7506	.8645	.9041
.468	.9934	.7476	.8675	.9063
.416	.9827	.7327	.8635	.9033
.364	.9870	.7454	.8690	.9075
.312	.9913	.7446	.8667	.9057
.260	.9880	.7536	.8734	.9107
.208	.9848	.7458	.8702	.9084
.156	1.0064	.7248	.8486	.8920
.104	1.0031	.7186	.8464	.8902
.052	1.0064	.7299	.8516	.8942
0.000	1.0215	.7609	.8631	.9030
-.052	1.0247	.7869	.8763	.9129
-.104	1.0279	.8148	.8903	.9233
-.156	1.0430	.8338	.8941	.9261
-.208	1.0581	.8612	.9022	.9320
-.260	1.0527	.8905	.9198	.9447
-.312	1.0473	.9015	.9278	.9505
-.364	1.0495	.9178	.9352	.9557
-.416	1.0516	.9157	.9332	.9543
-.468	1.0527	.9289	.9394	.9586
-.520	1.0538	.9270	.9379	.9576
-.572	1.0581	.9296	.9373	.9572
-.624	1.0624	.9238	.9325	.9538
-.676	1.0635	.9303	.9353	.9558
-.728	1.0646	.9268	.9330	.9542
-.780	1.0667	.9347	.9361	.9563
-.832	1.0689	.9326	.9341	.9549
-.884	1.0678	.9412	.9388	.9583
-.936	1.0667	.9514	.9444	.9622
-.988	1.0624	.9521	.9467	.9638
-1.040	1.0581	.9479	.9465	.9636

(h) $x/D = 6.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

p_∞ = 10 613.74 N/m^2 (221.67 lb/ft^2);
q_∞ = 19 019.82 N/m^2 (397.24 lb/ft^2);
$p_{t,\infty}$ = 45 112.78 N/m^2 (942.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0726	.9420	.9371	.9571
.988	1.0758	.9364	.9329	.9541
.936	1.0791	.9257	.9262	.9494
.884	1.0704	.9122	.9231	.9471
.832	1.0618	.9020	.9217	.9461
.780	1.0553	.8881	.9173	.9430
.728	1.0489	.8607	.9059	.9347
.676	1.0694	.8502	.8916	.9243
.624	1.0899	.7923	.8526	.8950
.572	1.0888	.7687	.8403	.8855
.520	1.0877	.7519	.8314	.8786
.468	1.0791	.7621	.8404	.8856
.416	1.0704	.7638	.8447	.8889
.364	1.0769	.7540	.8367	.8828
.312	1.0834	.7596	.8373	.8832
.260	1.0683	.7591	.8429	.8876
.208	1.0532	.7518	.8449	.8891
.156	1.0284	.7413	.8490	.8922
.104	1.0133	.7408	.8550	.8968
.052	1.0197	.7497	.8574	.8987
0.000	.9733	.7820	.8964	.9278
-.052	.9798	.8017	.9046	.9338
-.104	.9863	.8306	.9177	.9433
-.156	1.0499	.8475	.8984	.9293
-.208	1.1136	.8692	.8835	.9183
-.260	1.1147	.8942	.8957	.9272
-.312	1.1158	.9041	.9001	.9305
-.364	1.1190	.9202	.9068	.9354
-.416	1.1222	.9196	.9052	.9342
-.468	1.1190	.9303	.9118	.9390
-.520	1.1158	.9308	.9134	.9401
-.572	1.1104	.9335	.9169	.9427
-.624	1.1050	.9345	.9196	.9446
-.676	1.1147	.9327	.9147	.9411
-.728	1.1244	.9309	.9099	.9376
-.780	1.1158	.9359	.9158	.9419
-.832	1.1071	.9408	.9218	.9462
-.884	1.1007	.9470	.9275	.9503
-.936	1.0942	.9515	.9325	.9538
-.988	1.0931	.9533	.9339	.9548
-1.040	1.0920	.9518	.9336	.9546

TABLE 5.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) x/D = 7.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 618.24 N/m^2 (221.77 lb/ft^2);
q_∞ = 19 027.89 N/m^2 (397.41 lb/ft^2);
$p_{t,\infty}$ = 45 131.93 N/m^2 (942.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0527	.9438	.9469	.9639
.988	1.0829	.9434	.9334	.9544
.936	1.1131	.9346	.9163	.9422
.884	1.1595	.9177	.8896	.9228
.832	1.2059	.9006	.8642	.9038
.780	1.2825	.8587	.8183	.8683
.728	1.3591	.8485	.7901	.8458
.676	1.3483	.7939	.7673	.8271
.624	1.3375	.7875	.7673	.8271
.572	1.3267	.7482	.7509	.8134
.520	1.3159	.7539	.7569	.8184
.468	1.2933	.7448	.7589	.8201
.416	1.2706	.7409	.7636	.8240
.364	1.2631	.7442	.7676	.8273
.312	1.2555	.7527	.7743	.8328
.260	1.2437	.7517	.7775	.8354
.208	1.2318	.7404	.7753	.8336
.156	1.2555	.7354	.7654	.8254
.104	1.2437	.7396	.7712	.8303
.052	1.2372	.7531	.7802	.8377
0.000	1.2555	.7717	.7840	.8408
-.052	1.2490	.8049	.8028	.8560
-.104	1.2426	.8301	.8173	.8675
-.156	1.2760	.8371	.8099	.8617
-.208	1.3094	.8679	.8141	.8650
-.260	1.2933	.8830	.8263	.8746
-.312	1.2771	.9048	.8417	.8866
-.364	1.2760	.9101	.8445	.8888
-.416	1.2749	.9238	.8512	.8939
-.468	1.2437	.9314	.8654	.9047
-.520	1.2124	.9373	.8793	.9151
-.572	1.1703	.9417	.8970	.9283
-.624	1.1282	.9377	.9117	.9389
-.676	1.0980	.9465	.9285	.9509
-.728	1.0678	.9486	.9425	.9609
-.780	1.0366	.9492	.9569	.9709
-.832	1.0053	.9331	.9634	.9754
-.884	.9869	.9479	.9800	.9867
-.936	.9686	.9462	.9883	.9922
-.988	.9686	.9478	.9892	.9928
-1.040	.9686	.9495	.9901	.9934

(j) x/D = 8.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 10 606.98 N/m^2 (221.53 lb/ft^2);
q_∞ = 19 007.70 N/m^2 (396.98 lb/ft^2);
$p_{t,\infty}$ = 45 084.05 N/m^2 (941.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1791	.9405	.8931	.9254
.988	1.1759	.9209	.8850	.9194
.936	1.1726	.9080	.8800	.9157
.884	1.1694	.8985	.8766	.9131
.832	1.1662	.8738	.8656	.9049
.780	1.1543	.8693	.8678	.9065
.728	1.1424	.8478	.8615	.9018
.676	1.1543	.8303	.8481	.8916
.624	1.1662	.7957	.8261	.8744
.572	1.1640	.7894	.8235	.8724
.520	1.1618	.7813	.8200	.8697
.468	1.1510	.7834	.8250	.8736
.416	1.1402	.7889	.8318	.8789
.364	1.1478	.7806	.8247	.8733
.312	1.1554	.7757	.8194	.8692
.260	1.1435	.7763	.8240	.8728
.208	1.1316	.7684	.8241	.8728
.156	1.1726	.7620	.8061	.8586
.104	1.1608	.7644	.8115	.8629
.052	1.1662	.7770	.8163	.8667
0.000	1.1899	.7894	.8145	.8653
-.052	1.1953	.8087	.8225	.8717
-.104	1.2007	.8314	.8321	.8792
-.156	1.2353	.8501	.8296	.8772
-.208	1.2698	.8621	.8240	.8728
-.260	1.2579	.8813	.8370	.8830
-.312	1.2461	.8972	.8485	.8919
-.364	1.2417	.9064	.8544	.8963
-.416	1.2374	.9207	.8626	.9026
-.468	1.2439	.9212	.8606	.9011
-.520	1.2504	.9234	.8593	.9001
-.572	1.2385	.9307	.8669	.9058
-.624	1.2266	.9363	.8737	.9109
-.676	1.2255	.9331	.8726	.9101
-.728	1.2245	.9367	.8746	.9117
-.780	1.2201	.9375	.8765	.9131
-.832	1.2158	.9467	.8824	.9175
-.884	1.2201	.9459	.8805	.9160
-.936	1.2245	.9518	.8817	.9169
-.988	1.2288	.9510	.8797	.9155
-1.040	1.2331	.9586	.8817	.9169

TABLE 5.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 1.60 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(k) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 10\ 606.98\ N/m^2$ ($221.53\ lb/ft^2$);
$q_\infty = 19\ 007.70\ N/m^2$ ($396.98\ lb/ft^2$);
$p_{t,\infty} = 45\ 084.05\ N/m^2$ ($941.60\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1208	.9378	.9147	.9411
.988	1.1219	.9174	.9043	.9336
.936	1.1230	.9055	.8979	.9289
.884	1.1186	.8978	.8959	.9274
.832	1.1143	.8835	.8904	.9234
.780	1.1057	.8682	.8861	.9202
.728	1.0970	.8580	.8844	.9189
.676	1.1165	.8206	.8573	.8986
.624	1.1359	.8169	.8480	.8915
.572	1.1456	.7997	.8355	.8818
.520	1.1554	.7996	.8319	.8790
.468	1.1564	.7891	.8261	.8744
.416	1.1575	.7974	.8300	.8775
.364	1.1705	.7898	.8214	.8708
.312	1.1834	.7924	.8183	.8683
.260	1.1737	.7789	.8146	.8654
.208	1.1640	.7723	.8145	.8653
.156	1.1942	.7646	.8001	.8538
.104	1.1845	.7716	.8071	.8594
.052	1.1791	.7847	.8158	.8663
0.000	1.2050	.8000	.8148	.8656
-.052	1.1996	.8113	.8224	.8715
-.104	1.1942	.8428	.8401	.8854
-.156	1.2201	.8480	.8337	.8804
-.208	1.2461	.8616	.8315	.8787
-.260	1.2353	.8789	.8435	.8880
-.312	1.2245	.8962	.8555	.8972
-.364	1.2201	.9055	.8615	.9017
-.416	1.2158	.9215	.8706	.9086
-.468	1.2255	.9230	.8678	.9066
-.520	1.2353	.9245	.8651	.9045
-.572	1.2309	.9270	.8678	.9065
-.624	1.2266	.9363	.8737	.9109
-.676	1.2288	.9325	.8711	.9090
-.728	1.2309	.9388	.8733	.9107
-.780	1.2255	.9398	.8757	.9125
-.832	1.2201	.9476	.8812	.9166
-.884	1.2169	.9465	.8819	.9171
-.936	1.2137	.9538	.8865	.9205
-.988	1.2072	.9550	.8894	.9227
-1.040	1.2007	.9579	.8932	.9254

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 4843.82\ N/m^2$ ($101.17\ lb/ft^2$);
$q_\infty = 17\ 936.67\ N/m^2$ ($374.62\ lb/ft^2$);
$p_{t,\infty} = 60\ 568.53\ N/m^2$ ($1265.00\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7781	.6975	.9467	.9730
.988	.7117	.6745	.9735	.9868
.936	.6453	.6514	1.0048	1.0023
.884	.6050	.6282	1.0190	1.0091
.832	.5646	.6067	1.0366	1.0173
.780	.5243	.5870	1.0581	1.0270
.728	.4840	.5672	1.0826	1.0377
.676	.4579	.5482	1.0942	1.0426
.624	.4318	.5379	1.1161	1.0517
.572	.4247	.5366	1.1241	1.0549
.520	.4175	.5406	1.1379	1.0604
.468	.4507	.3843	.9234	.9605
.416	.4840	.1240	.5062	.6441
.364	.4840	.0302	.2499	.3472
.312	.4840	.0070	.1204	.1714
.260	.4887	0.0000	0.0000	0.0000
.208	.4934	0.0000	0.0000	0.0000
.156	.5029	0.0000	0.0000	0.0000
.104	.5124	0.0000	0.0000	0.0000
.052	.4934	0.0000	0.0000	0.0000
0.000	.4745	.0001	.0141	.0203
-.104	.4887	.0029	.0775	.1109
-.156	.4887	.0029	.0775	.1109
-.208	.4887	.0122	.1580	.2237
-.260	.4460	.0739	.4072	.5388
-.312	.4460	.1862	.6461	.7720
-.364	.4650	.3947	.9213	.9594
-.416	.4033	.5360	1.1528	1.0662
-.468	.4223	.5416	1.1325	1.0582
-.520	.4413	.5524	1.1189	1.0528
-.572	.4555	.5672	1.1159	1.0516
-.624	.4697	.5801	1.1113	1.0497
-.676	.5101	.5912	1.0766	1.0351
-.728	.5504	.6057	1.0491	1.0230
-.780	.5812	.6209	1.0336	1.0159
-.832	.6121	.6397	1.0223	1.0107
-.884	.6310	.6593	1.0221	1.0106
-.936	.6500	.6824	1.0246	1.0117
-.988	.7046	.7047	1.0000	1.0000
-1.040	.7592	.7321	.9820	.9912

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 4851.48\ N/m^2$ ($101.33\ lb/ft^2$);
$q_\infty = 17\ 967.87\ N/m^2$ ($375.27\ lb/ft^2$);
$p_{t,\infty} = 60\ 664.29\ N/m^2$ ($1267.00\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6582	.6618	1.0027	1.0013
.988	.5990	.6435	1.0365	1.0172
.936	.5398	.6270	1.0777	1.0356
.884	.5090	.6084	1.0932	1.0422
.832	.4782	.5932	1.1137	1.0507
.780	.4546	.5810	1.1306	1.0575
.728	.4309	.5723	1.1525	1.0660
.676	.4451	.5730	1.1346	1.0591
.624	.4593	.5981	1.1411	1.0616
.572	.5919	.6301	1.0318	1.0151
.520	.7245	.6585	.9534	.9765
.468	.7742	.6792	.9366	.9677
.416	.8239	.5268	.7996	.8860
.364	.8121	.2479	.5525	.6891
.312	.8002	.1012	.3555	.4790
.260	.8002	.0226	.1679	.2374
.208	.8002	.0105	.1143	.1629
.156	.8002	.0042	.0726	.1039
.104	.8002	.0196	.1564	.2215
.052	.7979	.0541	.2605	.3610
0.000	.7955	.0804	.3180	.4335
-.104	.9044	.1434	.3981	.5286
-.156	.8997	.2294	.5049	.6428
-.208	.8949	.4283	.6918	.8086
-.260	.7931	.6600	.9122	.9543
-.312	.7884	.6814	.9297	.9639
-.364	.6866	.6593	.9799	.9901
-.416	.6818	.6509	.9770	.9886
-.468	.5800	.6585	1.0655	1.0303
-.520	.4782	.5820	1.1032	1.0464
-.572	.4664	.5846	1.1196	1.0531
-.624	.4546	.5925	1.1417	1.0619
-.676	.4853	.5990	1.1109	1.0495
-.728	.5161	.6090	1.0862	1.0392
-.780	.5351	.6198	1.0763	1.0350
-.832	.5540	.6307	1.0669	1.0309
-.884	.5540	.6464	1.0802	1.0366
-.936	.5540	.6656	1.0961	1.0434
-.988	.5895	.6805	1.0744	1.0342
-1.040	.6250	.6989	1.0574	1.0267

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 4851.10$ N/m^2 (101.32 lb/ft^2);
$q_\infty = 17\ 963.61$ N/m^2 (375.18 lb/ft^2);
$p_{t,\infty} = 60\ 659.50$ N/m^2 (1266.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.6015	.6466	1.0368	1.0174
.988	.5518	.6346	1.0724	1.0333
.936	.5021	.6226	1.1135	1.0506
.884	.4831	.6065	1.1204	1.0534
.832	.4642	.5957	1.1328	1.0584
.780	.5850	.6130	1.0237	1.0113
.728	.7057	.7559	1.0349	1.0165
.676	.8242	.7435	.9498	.9747
.624	.9426	.7345	.8828	.9376
.572	.9639	.7364	.8741	.9325
.520	.9852	.7382	.8656	.9275
.468	.9733	.7146	.8569	.9222
.416	.9615	.6402	.8160	.8966
.364	.9355	.5122	.7399	.8447
.312	.9094	.3817	.6478	.7734
.260	.9094	.2738	.5487	.6855
.208	.9094	.2536	.5281	.6657
.156	.9757	.2690	.5250	.6627
.104	1.0420	.3264	.5597	.6959
.052	1.0633	.3840	.6009	.7333
0.000	1.0847	.4696	.6580	.7817
-.104	1.1699	.6762	.7603	.8592
-.156	1.1723	.7571	.8036	.8886
-.208	1.1747	.7797	.8147	.8958
-.260	1.0918	.7739	.8420	.9130
-.312	1.0941	.7702	.8390	.9112
-.364	.9260	.7779	.9166	.9567
-.416	1.0136	.7554	.8633	.9261
-.468	.8455	.7262	.9268	.9623
-.520	.6773	.6495	.9793	.9898
-.572	.6465	.6518	1.0041	1.0020
-.624	.6157	.6699	1.0430	1.0202
-.676	.6678	.6835	1.0117	1.0056
-.728	.7199	.7041	.9889	.9946
-.780	.6371	.6438	1.0053	1.0026
-.832	.5542	.6412	1.0757	1.0347
-.884	.5352	.6513	1.1031	1.0463
-.936	.5163	.6649	1.1349	1.0592
-.988	.5400	.6737	1.1170	1.0520
-1.040	.5636	.6859	1.1032	1.0464

(d) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 4852.25$ N/m^2 (101.34 lb/ft^2);
$q_\infty = 17\ 967.87$ N/m^2 (375.37 lb/ft^2);
$p_{t,\infty} = 60\ 673.86$ N/m^2 (1267.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.5871	.6563	1.0573	1.0267
.988	.7125	.7517	1.0271	1.0129
.936	.8380	.7842	.9674	.9838
.884	.8806	.7775	.9397	.9693
.832	.9232	.7725	.9148	.9557
.780	.9492	.7688	.9000	.9474
.728	.9753	.7598	.8827	.9375
.676	.9871	.7537	.8738	.9323
.624	.9989	.7492	.8661	.9277
.572	1.0013	.7403	.8599	.9240
.520	1.0037	.7138	.8433	.9139
.468	.9753	.6547	.8193	.8988
.416	.9469	.5569	.7669	.8638
.364	.9279	.4597	.7039	.8179
.312	.9090	.3905	.6554	.7796
.260	.8995	.3771	.6475	.7731
.208	.8900	.3957	.6667	.7888
.156	.9587	.4164	.6590	.7826
.104	1.0273	.4531	.6641	.7867
.052	1.0486	.5097	.6972	.8128
0.000	1.0699	.5874	.7409	.8454
-.104	1.1031	.7245	.8104	.8930
-.156	1.1173	.7497	.8192	.8987
-.208	1.1315	.7679	.8238	.9016
-.260	1.1055	.7629	.8308	.9060
-.312	1.1197	.7636	.8258	.9029
-.364	1.1078	.7698	.8336	.9078
-.416	1.1078	.7733	.8355	.9090
-.468	1.0960	.7759	.8414	.9127
-.520	1.0841	.7804	.8484	.9170
-.572	1.0581	.7859	.8618	.9252
-.624	1.0321	.7897	.8747	.9328
-.676	.8427	.7621	.9510	.9752
-.728	.6533	.6818	1.0216	1.0103
-.780	.6723	.6909	1.0138	1.0066
-.832	.6912	.7070	1.0114	1.0055
-.884	.6983	.7292	1.0219	1.0104
-.936	.7054	.7531	1.0333	1.0158
-.988	.6675	.7734	1.0764	1.0350
-1.040	.6297	.7238	1.0721	1.0332

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) x/D = 3.0; y/D = 0.0; $\alpha = 5^o$;

$p_\infty = 4854.16$ N/m^2 (101.38 lb/ft^2);
$q_\infty = 17\ 974.96$ N/m^2 (375.41 lb/ft^2);
$p_{t,\infty} = 60\ 697.80$ N/m^2 (1267.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9760	.8214	.9174	.9572
.988	.9760	.8196	.9164	.9567
.936	.9760	.8179	.9154	.9561
.884	.9902	.8081	.9034	.9494
.832	1.0044	.7948	.8895	.9415
.780	1.0091	.7822	.8804	.9362
.728	1.0139	.7678	.8702	.9302
.676	.9973	.7481	.8661	.9277
.624	.9807	.7267	.8608	.9246
.572	.9617	.6984	.8522	.9193
.520	.9428	.6562	.8342	.9082
.468	.9286	.5890	.7964	.8838
.416	.9144	.5076	.7451	.8484
.364	.9025	.4575	.7120	.8241
.312	.8907	.4444	.7064	.8198
.260	.8859	.4589	.7197	.8298
.208	.8812	.4769	.7356	.8416
.156	.9333	.4990	.7312	.8383
.104	.9854	.5282	.7321	.8390
.052	.9949	.5749	.7601	.8591
0.000	1.0044	.6285	.7911	.8803
-.104	1.0044	.7214	.8475	.9165
-.156	1.0186	.7308	.8470	.9162
-.208	1.0328	.7402	.8466	.9159
-.260	1.0186	.7413	.8531	.9199
-.312	1.0328	.7455	.8496	.9177
-.364	1.0376	.7486	.8494	.9176
-.416	1.0328	.7577	.8565	.9220
-.468	1.0376	.7661	.8593	.9237
-.520	1.0423	.7763	.8630	.9259
-.572	1.0447	.7849	.8668	.9281
-.624	1.0470	.7934	.8705	.9304
-.676	1.0518	.8053	.8750	.9330
-.728	1.0565	.8172	.8795	.9357
-.780	1.0518	.8316	.8892	.9413
-.832	1.0470	.8442	.8979	.9463
-.884	.8575	.8638	1.0036	1.0018
-.936	.6680	.7503	1.0598	1.0278
-.988	.6775	.7461	1.0494	1.0231
-1.040	.6870	.7629	1.0538	1.0251

(f) x/D = 4.0; y/D = 0.0; $\alpha = 5^o$;

$p_\infty = 4866.80$ N/m^2 (101.65 lb/ft^2);
$q_\infty = 18\ 021.75$ N/m^2 (376.39 lb/ft^2);
$p_{t,\infty} = 60\ 855.81$ N/m^2 (1271.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0022	.8432	.9172	.9571
.988	.9975	.8279	.9110	.9536
.936	.9928	.8178	.9076	.9517
.884	.9999	.8033	.8963	.9454
.832	1.0070	.7906	.8861	.9395
.780	1.0070	.7731	.8762	.9337
.728	1.0070	.7487	.8623	.9255
.676	.9857	.7155	.8520	.9192
.624	.9644	.6788	.8389	.9112
.572	.9573	.6392	.8171	.8973
.520	.9502	.5890	.7873	.8777
.468	.9455	.5456	.7597	.8587
.416	.9408	.5145	.7395	.8444
.364	.9337	.5150	.7427	.8467
.312	.9266	.5244	.7523	.8535
.260	.9266	.5419	.7647	.8623
.208	.9266	.5559	.7746	.8691
.156	.9668	.5684	.7668	.8637
.104	1.0070	.5897	.7653	.8627
.052	1.0046	.6214	.7865	.8772
0.000	1.0022	.6601	.8115	.8938
-.104	.9928	.7141	.8481	.9168
-.156	.9999	.7223	.8499	.9180
-.208	1.0070	.7287	.8507	.9184
-.260	.9928	.7316	.8584	.9231
-.312	.9999	.7345	.8571	.9223
-.364	1.0022	.7396	.8590	.9235
-.416	.9928	.7473	.8676	.9286
-.468	.9952	.7541	.8705	.9304
-.520	.9975	.7610	.8734	.9321
-.572	.9975	.7697	.8784	.9350
-.624	.9975	.7802	.8844	.9385
-.676	1.0022	.7921	.8890	.9412
-.728	1.0070	.8040	.8935	.9438
-.780	1.0022	.8131	.9007	.9478
-.832	.9975	.8274	.9107	.9535
-.884	.9928	.8382	.9189	.9580
-.936	.9881	.8473	.9261	.9619
-.988	.9857	.8562	.9320	.9652
-1.040	.9833	.8652	.9380	.9684

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER $(1.65 \times 10^6$ PER FOOT) – Continued

(g) $x/D = 5.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 4862.20$ N/m^2 (101.55 lb/ft^2);
$q_\infty = 18\ 004.73$ N/m^2 (376.04 lb/ft^2);
$p_{t,\infty} = 60\ 798.35$ N/m^2 (1269.80 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1777	.8899	.8693	.9296
.988	1.1635	.8805	.8699	.9300
.936	1.1494	.8624	.8662	.9278
.884	1.1494	.8467	.8583	.9231
.832	1.1494	.8223	.8458	.9154
.780	1.1470	.7963	.8332	.9076
.728	1.1446	.7580	.8138	.8952
.676	1.1233	.7142	.7973	.8844
.624	1.1021	.6844	.7880	.8782
.572	1.1021	.6511	.7686	.8650
.520	1.1021	.6230	.7519	.8532
.468	1.1044	.6070	.7414	.8457
.416	1.1068	.5981	.7351	.8412
.364	1.1021	.6055	.7412	.8456
.312	1.0973	.6129	.7473	.8500
.260	1.0950	.6166	.7504	.8522
.208	1.0926	.6133	.7492	.8513
.156	1.1233	.6090	.7363	.8420
.104	1.1541	.6135	.7291	.8368
.052	1.1517	.6330	.7414	.8457
0.000	1.1494	.6578	.7565	.8565
−.104	1.1399	.7226	.7962	.8837
−.156	1.1352	.7458	.8105	.8931
−.208	1.1304	.7602	.8200	.8992
−.260	1.1304	.7672	.8238	.9016
−.312	1.1257	.7728	.8286	.9047
−.364	1.1281	.7779	.8304	.9058
−.416	1.1210	.7855	.8371	.9100
−.468	1.1233	.7905	.8389	.9111
−.520	1.1257	.7974	.8416	.9128
−.572	1.1304	.8058	.8443	.9145
−.624	1.1352	.8177	.8487	.9172
−.676	1.1446	.8292	.8511	.9187
−.728	1.1541	.8390	.8526	.9196
−.780	1.1470	.8518	.8618	.9251
−.832	1.1399	.8663	.8718	.9311
−.884	1.1494	.8849	.8774	.9344
−.936	1.1588	.8964	.8795	.9357
−.988	1.1612	.9120	.8862	.9396
−1.040	1.1635	.9205	.8895	.9414

(h) $x/D = 6.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 4857.61$ N/m^2 (101.45 lb/ft^2);
$q_\infty = 17\ 987.72$ N/m^2 (375.68 lb/ft^2);
$p_{t,\infty} = 60\ 740.90$ N/m^2 (1268.60 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1315	.8699	.8768	.9341
.988	1.1055	.8545	.8792	.9355
.936	1.0794	.8425	.8835	.9380
.884	1.0747	.8219	.8745	.9327
.832	1.0700	.8031	.8664	.9279
.780	1.0723	.7784	.8520	.9192
.728	1.0747	.7520	.8365	.9097
.676	1.0652	.7178	.8209	.8998
.624	1.0558	.6940	.8108	.8933
.572	1.0581	.6728	.7974	.8845
.520	1.0605	.6621	.7902	.8796
.468	1.0700	.6508	.7799	.8727
.416	1.0794	.6518	.7771	.8708
.364	1.0747	.6575	.7822	.8743
.312	1.0700	.6579	.7841	.8756
.260	1.0652	.6477	.7798	.8726
.208	1.0605	.6393	.7764	.8704
.156	1.0771	.6257	.7622	.8605
.104	1.0936	.6174	.7513	.8528
.052	1.0936	.6174	.7513	.8528
0.000	1.0936	.6349	.7619	.8603
−.104	1.0747	.6881	.8002	.8863
−.156	1.0723	.7129	.8153	.8962
−.208	1.0700	.7359	.8293	.9051
−.260	1.0676	.7501	.8382	.9107
−.312	1.0652	.7573	.8432	.9138
−.364	1.0700	.7604	.8430	.9137
−.416	1.0605	.7664	.8501	.9181
−.468	1.0652	.7748	.8529	.9198
−.520	1.0700	.7797	.8537	.9202
−.572	1.0747	.7881	.8564	.9219
−.624	1.0794	.7965	.8590	.9235
−.676	1.0865	.8048	.8606	.9244
−.728	1.0936	.8182	.8650	.9271
−.780	1.0865	.8310	.8746	.9328
−.832	1.0794	.8439	.8842	.9384
−.884	1.0889	.8571	.8872	.9401
−.936	1.0984	.8739	.8920	.9429
−.988	1.1102	.8888	.8947	.9445
−1.040	1.1220	.9019	.8966	.9455

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) x/D = 7.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 4859.14 N/m^2 (101.49 lb/ft^2);
q_∞ = 17 993.39 N/m^2 (375.80 lb/ft^2);
$p_{t,\infty}$ = 60 760.05 N/m^2 (1269.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0552	.8503	.8977	.9462
.988	1.0315	.8312	.8977	.9461
.936	1.0079	.8190	.9015	.9483
.884	1.0055	.8017	.8930	.9434
.832	1.0031	.7810	.8823	.9373
.780	1.0031	.7600	.8704	.9303
.728	1.0031	.7373	.8573	.9224
.676	.9937	.7065	.8432	.9138
.624	.9842	.6932	.8393	.9114
.572	.9889	.6806	.8296	.9053
.520	.9937	.6715	.8221	.9005
.468	1.0031	.6690	.8166	.8971
.416	1.0126	.6630	.8092	.8922
.364	1.0055	.6653	.8134	.8950
.312	.9984	.6659	.8167	.8971
.260	.9937	.6575	.8134	.8950
.208	.9889	.6473	.8091	.8921
.156	1.0008	.6306	.7938	.8821
.104	1.0126	.6227	.7842	.8756
.052	1.0150	.6172	.7798	.8727
0.000	1.0173	.6293	.7865	.8772
-.104	.9984	.6728	.8209	.8998
-.156	1.0031	.6917	.8304	.9058
-.208	1.0079	.7124	.8407	.9123
-.260	1.0008	.7305	.8544	.9207
-.312	1.0055	.7389	.8572	.9224
-.364	1.0055	.7424	.8593	.9236
-.416	1.0031	.7513	.8654	.9273
-.468	1.0031	.7566	.8685	.9291
-.520	1.0031	.7618	.8715	.9309
-.572	1.0055	.7687	.8743	.9326
-.624	1.0079	.7773	.8782	.9349
-.676	1.0126	.7874	.8818	.9370
-.728	1.0173	.7975	.8854	.9391
-.780	1.0126	.8084	.8935	.9438
-.832	1.0079	.8210	.9026	.9489
-.884	1.0126	.8347	.9079	.9519
-.936	1.0173	.8483	.9132	.9548
-.988	1.0244	.8618	.9172	.9571
-1.040	1.0315	.8752	.9211	.9592

(j) x/D = 8.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 4860.67 N/m^2 (101.52 lb/ft^2);
q_∞ = 17 999.06 N/m^2 (375.92 lb/ft^2);
$p_{t,\infty}$ = 60 779.20 N/m^2 (1269.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9882	.8349	.9192	.9582
.988	.9693	.8120	.9153	.9560
.936	.9504	.7977	.9162	.9565
.884	.9480	.7787	.9063	.9510
.832	.9457	.7615	.8973	.9460
.780	.9457	.7405	.8849	.9388
.728	.9457	.7178	.8713	.9308
.676	.9409	.6990	.8619	.9252
.624	.9362	.6819	.8534	.9201
.572	.9409	.6711	.8445	.9146
.520	.9457	.6707	.8422	.9132
.468	.9527	.6649	.8354	.9090
.416	.9598	.6626	.8309	.9061
.364	.9527	.6649	.8354	.9090
.312	.9457	.6602	.8355	.9091
.260	.9409	.6501	.8312	.9063
.208	.9362	.6417	.8279	.9043
.156	.9457	.6287	.8154	.8962
.104	.9551	.6227	.8075	.8911
.052	.9575	.6173	.8029	.8881
0.000	.9598	.6294	.8097	.8926
-.104	.9457	.6644	.8382	.9107
-.156	.9527	.6779	.8435	.9140
-.208	.9598	.6984	.8530	.9198
-.260	.9480	.7115	.8663	.9279
-.312	.9551	.7198	.8681	.9289
-.364	.9575	.7248	.8701	.9301
-.416	.9504	.7306	.8768	.9341
-.468	.9527	.7374	.8798	.9358
-.520	.9551	.7425	.8817	.9369
-.572	.9551	.7495	.8859	.9394
-.624	.9551	.7600	.8920	.9429
-.676	.9575	.7668	.8949	.9446
-.728	.9598	.7807	.9018	.9485
-.780	.9575	.7896	.9081	.9520
-.832	.9551	.8003	.9154	.9561
-.884	.9575	.8123	.9211	.9592
-.936	.9598	.8261	.9277	.9629
-.988	.9669	.8396	.9318	.9651
-1.040	.9740	.8513	.9349	.9667

TABLE 6.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.30 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(k) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 5^{\circ}$;

$p_\infty = 4851.48$ N/m^2 (101.33 lb/ft^2);
$q_\infty = 17\ 965.03$ N/m^2 (375.21 lb/ft^2);
$p_{t,\infty} = 60\ 664.29$ N/m^2 (1267.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.9623	.8282	.9277	.9628
.988	.9433	.8069	.9249	.9613
.936	.9244	.7891	.9240	.9608
.884	.9196	.7720	.9162	.9566
.832	.9149	.7532	.9073	.9516
.780	.9172	.7320	.8933	.9437
.728	.9196	.7108	.8792	.9355
.676	.9149	.6920	.8697	.9299
.624	.9101	.6766	.8622	.9254
.572	.9149	.6727	.8575	.9226
.520	.9196	.6654	.8506	.9184
.468	.9267	.6596	.8436	.9141
.416	.9338	.6590	.8401	.9119
.364	.9244	.6615	.8460	.9155
.312	.9149	.6605	.8497	.9178
.260	.9149	.6500	.8429	.9136
.208	.9149	.6395	.8360	.9094
.156	.9220	.6267	.8244	.9020
.104	.9291	.6226	.8186	.8983
.052	.9291	.6191	.8163	.8968
0.000	.9291	.6314	.8243	.9020
-.104	.9196	.6626	.8488	.9173
-.156	.9291	.6759	.8529	.9198
-.208	.9386	.6927	.8591	.9235
-.260	.9244	.7078	.8751	.9331
-.312	.9338	.7141	.8745	.9327
-.364	.9338	.7211	.8788	.9352
-.416	.9291	.7250	.8834	.9379
-.468	.9291	.7320	.8876	.9404
-.520	.9291	.7373	.8908	.9422
-.572	.9267	.7427	.8952	.9448
-.624	.9244	.7517	.9018	.9485
-.676	.9267	.7620	.9068	.9513
-.728	.9291	.7724	.9118	.9541
-.780	.9291	.7846	.9190	.9581
-.832	.9291	.7934	.9241	.9609
-.884	.9291	.8074	.9322	.9653
-.936	.9291	.8197	.9393	.9691
-.988	.9362	.8314	.9424	.9707
-1.040	.9433	.8431	.9454	.9723

TABLE 7.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42 × 10^6 PER METER (1.65 × 10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 2477.51\ N/m^2$ ($51.74\ lb/ft^2$);
$q_\infty = 15\ 194.84\ N/m^2$ ($317.35\ lb/ft^2$);
$p_{t,\infty} = 85\ 696.09\ N/m^2$ ($1789.80\ lb/ft^2$)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	.9561	.6127	.8005	.9115
.988	.8354	.5789	.8325	.9281
.936	.7148	.5534	.8799	.9509
.884	.6683	.5307	.8911	.9560
.832	.6219	.5122	.9075	.9632
.780	.5802	.4955	.9241	.9703
.728	.5384	.4787	.9430	.9781
.676	.5105	.4594	.9486	.9804
.624	.4827	.4400	.9548	.9828
.572	.4084	.4227	1.0173	1.0062
.520	.3342	.4053	1.1013	1.0335
.468	.3713	.4057	1.0453	1.0158
.416	.4084	.3692	.9507	.9812
.364	.4734	.1535	.5695	.7544
.312	.5384	.0516	.3097	.4754
.260	.5477	.0087	.1259	.2060
.208	.5569	.0036	.0808	.1333
.156	.5709	.0014	.0497	.0823
.104	.5848	0.0000	0.0000	0.0000
.052	.5709	.0087	.1233	.2019
0.000	.5569	.0073	.1142	.1873
-.104	.5848	.0104	.1335	.2181
-.156	.5569	.0275	.2220	.3534
-.208	.5291	.1048	.4450	.6361
-.260	.5059	.2565	.7121	.8596
-.312	.4780	.3881	.9010	.9604
-.364	.5013	.4036	.8973	.9587
-.416	.4270	.4316	1.0054	1.0019
-.468	.4502	.4430	.9919	.9970
-.520	.4734	.4543	.9797	.9925
-.572	.4734	.4647	.9907	.9966
-.624	.4734	.4750	1.0017	1.0006
-.676	.5245	.4852	.9618	.9856
-.728	.5755	.4995	.9316	.9734
-.780	.6173	.5162	.9145	.9662
-.832	.6591	.5371	.9028	.9611
-.884	.6915	.5646	.9036	.9615
-.936	.7240	.6004	.9106	.9646
-.988	.8076	.6318	.8845	.9530
-1.040	.8911	.6757	.8708	.9467

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 2478.48\ N/m^2$ ($51.76\ lb/ft^2$);
$q_\infty = 15\ 200.79\ N/m^2$ ($317.48\ lb/ft^2$);
$p_{t,\infty} = 85\ 729.60\ N/m^2$ ($1790.50\ lb/ft^2$)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	.7980	.5556	.8345	.9291
.988	.6959	.5334	.8755	.9489
.936	.5938	.5173	.9333	.9742
.884	.5614	.4981	.9420	.9777
.832	.5289	.4851	.9577	.9840
.780	.4964	.4721	.9752	.9908
.728	.4639	.4612	.9971	.9989
.676	.4593	.4532	.9933	.9976
.624	.4547	.4513	.9963	.9987
.572	.4268	.4484	1.0250	1.0089
.520	.3990	.4455	1.0567	1.0195
.468	.6866	.4679	.8255	.9246
.416	.9743	.6219	.7990	.9107
.364	1.0021	.5980	.7725	.8960
.312	1.0300	.4895	.6894	.8448
.260	.9882	.2986	.5497	.7374
.208	.9464	.1765	.4318	.6220
.156	1.0300	.1172	.3374	.5111
.104	1.1135	.1771	.3989	.5852
.052	1.1274	.2641	.4840	.6761
0.000	1.1413	.3639	.5647	.7503
-.104	1.3640	.6188	.6735	.8340
-.156	1.2202	.6813	.7473	.8814
-.208	1.0763	.6527	.7787	.8995
-.260	1.0532	.5648	.7323	.8723
-.312	.9093	.5237	.7589	.8882
-.364	.7841	.5210	.8152	.9192
-.416	.7423	.5518	.8622	.9426
-.468	.6170	.4623	.8656	.9442
-.520	.4918	.4637	.9710	.9892
-.572	.4732	.4665	.9929	.9974
-.624	.4547	.4694	1.0161	1.0058
-.676	.4871	.4763	.9888	.9959
-.728	.5196	.4852	.9663	.9873
-.780	.5428	.4966	.9564	.9835
-.832	.5660	.5121	.9511	.9814
-.884	.5753	.5344	.9638	.9864
-.936	.5846	.5608	.9794	.9924
-.988	.6402	.5831	.9544	.9827
-1.040	.6959	.6137	.9391	.9765

TABLE 7.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 2479.72$ N/m^2 (51.79 lb/ft^2);
$q_\infty = 15\ 208.43$ N/m^2 (317.63 lb/ft^2);
$p_{t,\infty} = 85\ 772.69$ N/m^2 (1791.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7232	.5401	.8642	.9436
.988	.6305	.5236	.9113	.9649
.936	.5378	.5133	.9770	.9914
.884	.5239	.4995	.9765	.9913
.832	.5100	.4919	.9821	.9934
.780	.5007	.4861	.9853	.9946
.728	.4914	.4824	.9908	.9966
.676	.7047	.5739	.9024	.9610
.624	.9179	.6447	.8381	.9309
.572	1.0060	.6428	.7994	.9109
.520	1.0941	.6306	.7592	.8884
.468	1.0895	.6226	.7560	.8865
.416	1.0848	.5960	.7412	.8777
.364	1.0477	.5379	.7165	.8625
.312	1.0107	.4591	.6740	.8343
.260	1.0060	.3558	.5947	.7752
.208	1.0014	.3124	.5585	.7451
.156	1.0709	.3193	.5460	.7342
.104	1.1405	.3742	.5728	.7572
.052	1.1776	.4512	.6190	.7943
0.000	1.2146	.5488	.6722	.8331
−.104	1.2981	.6546	.7102	.8584
−.156	1.3213	.6660	.7100	.8583
−.208	1.3444	.6649	.7033	.8540
−.260	1.1080	.6798	.7833	.9021
−.312	1.1312	.6809	.7758	.8979
−.364	1.0199	.6858	.8200	.9218
−.416	.9179	.5912	.8025	.9126
−.468	.8067	.5259	.8075	.9152
−.520	.6954	.5350	.8771	.9496
−.572	.7047	.5532	.8860	.9537
−.624	.7139	.5693	.8930	.9568
−.676	.6259	.5896	.9706	.9890
−.728	.5378	.5068	.9708	.9891
−.780	.5424	.5107	.9704	.9889
−.832	.5471	.5209	.9758	.9910
−.884	.5424	.5355	.9936	.9977
−.936	.5378	.5543	1.0152	1.0054
−.988	.5702	.5694	.9992	.9997
−1.040	.6027	.5948	.9934	.9976

(d) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 2478.75$ N/m^2 (51.77 lb/ft^2);
$q_\infty = 15\ 202.48$ N/m^2 (317.51 lb/ft^2);
$p_{t,\infty} = 85\ 739.18$ N/m^2 (1790.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	.7053	.5453	.8793	.9506
.988	.6264	.5323	.9218	.9693
.936	.5475	.5275	.9815	.9932
.884	.7053	.6276	.9433	.9782
.832	.8630	.6556	.8716	.9471
.780	.9466	.6664	.8390	.9314
.728	1.0301	.6565	.7983	.9103
.676	1.0347	.6459	.7901	.9059
.624	1.0394	.6375	.7832	.9020
.572	1.0579	.6305	.7720	.8957
.520	1.0765	.6152	.7560	.8865
.468	1.0486	.5897	.7499	.8829
.416	1.0208	.5414	.7283	.8698
.364	.9976	.4785	.6926	.8469
.312	.9744	.4238	.6595	.8242
.260	.9605	.3789	.6281	.8012
.208	.9466	.3816	.6350	.8064
.156	1.0115	.4034	.6315	.8038
.104	1.0765	.4397	.6391	.8094
.052	1.0858	.4930	.6738	.8342
0.000	1.0950	.5545	.7116	.8593
−.104	1.1414	.6220	.7382	.8759
−.156	1.1600	.6294	.7366	.8750
−.208	1.1786	.6327	.7327	.8726
−.260	1.1461	.6363	.7451	.8801
−.312	1.1646	.6396	.7410	.8776
−.364	1.1693	.6414	.7406	.8774
−.416	1.1507	.6505	.7519	.8841
−.468	1.1554	.6565	.7538	.8852
−.520	1.1600	.6666	.7581	.8877
−.572	.9234	.6875	.8629	.9430
−.624	.6867	.5536	.8978	.9590
−.676	.7006	.5591	.8933	.9570
−.728	.7146	.5771	.8987	.9593
−.780	.7424	.5965	.8964	.9583
−.832	.7702	.6179	.8957	.9580
−.884	.6542	.6477	.9950	.9982
−.936	.5382	.5703	1.0294	1.0104
−.988	.5568	.5798	1.0205	1.0073
−1.040	.5754	.5976	1.0191	1.0068

TABLE 7.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(e) $x/D = 3.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 2478.34$ N/m^2 (51.76 lb/ft^2);
$q_\infty = 15\ 199.94$ N/m^2 (317.46 lb/ft^2);
$p_{t,\infty} = 85\ 724.81$ N/m^2 (1790.40 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0024	.7040	.8380	.9309
.988	.9931	.7044	.8422	.9329
.936	.9838	.6924	.8389	.9313
.884	.9931	.6776	.8260	.9248
.832	1.0024	.6730	.8194	.9214
.780	1.0163	.6662	.8096	.9163
.728	1.0303	.6512	.7950	.9085
.676	1.0210	.6351	.7887	.9051
.624	1.0117	.6210	.7835	.9022
.572	1.0070	.6027	.7736	.8967
.520	1.0024	.5761	.7581	.8877
.468	.9746	.5422	.7459	.8806
.416	.9467	.4939	.7223	.8661
.364	.9328	.4449	.6906	.8456
.312	.9189	.4208	.6767	.8362
.260	.9049	.4131	.6757	.8355
.208	.8910	.4220	.6882	.8440
.156	.9421	.4404	.6837	.8410
.104	.9931	.4628	.6827	.8403
.052	.9978	.4978	.7063	.8559
0.000	1.0024	.5389	.7332	.8729
-.104	1.0210	.5911	.7609	.8894
-.156	1.0349	.5987	.7606	.8892
-.208	1.0488	.6043	.7591	.8883
-.260	1.0349	.6070	.7659	.8922
-.312	1.0488	.6105	.7630	.8906
-.364	1.0488	.6147	.7655	.8921
-.416	1.0488	.6229	.7707	.8950
-.468	1.0488	.6312	.7758	.8979
-.520	1.0488	.6395	.7808	.9007
-.572	1.0581	.6515	.7847	.9029
-.624	1.0674	.6635	.7884	.9049
-.676	1.0767	.6796	.7945	.9082
-.728	1.0859	.6998	.8028	.9127
-.780	.9282	.7275	.8853	.9534
-.832	.7704	.6291	.9037	.9615
-.884	.7332	.6183	.9183	.9679
-.936	.6961	.6447	.9624	.9858
-.988	.7379	.6656	.9498	.9808
-1.040	.7796	.6948	.9440	.9785

(f) $x/D = 4.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 2479.44$ N/m^2 (51.78 lb/ft^2);
$q_\infty = 15\ 206.73$ N/m^2 (317.60 lb/ft^2);
$p_{t,\infty} = 85\ 763.12$ N/m^2 (1791.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1035	.7168	.8060	.9144
.988	1.0293	.6954	.8220	.9228
.936	.9551	.6802	.8439	.9338
.884	.9459	.6600	.8353	.9295
.832	.9366	.6460	.8305	.9271
.780	.9319	.6277	.8207	.9221
.728	.9273	.6135	.8134	.9183
.676	.9180	.5933	.8039	.9133
.624	.9088	.5731	.7941	.9080
.572	.9041	.5507	.7804	.9005
.520	.8995	.5220	.7618	.8899
.468	.8902	.4915	.7431	.8788
.416	.8809	.4610	.7234	.8668
.364	.8717	.4429	.7128	.8601
.312	.8624	.4433	.7170	.8627
.260	.8578	.4497	.7241	.8672
.208	.8531	.4602	.7345	.8736
.156	.8856	.4711	.7294	.8705
.104	.9180	.4841	.7261	.8685
.052	.9227	.5045	.7394	.8767
0.000	.9273	.5311	.7568	.8870
-.104	.9273	.5654	.7808	.9007
-.156	.9412	.5751	.7817	.9012
-.208	.9551	.5807	.7797	.9001
-.260	.9366	.5836	.7894	.9054
-.312	.9505	.5871	.7859	.9035
-.364	.9551	.5910	.7866	.9039
-.416	.9459	.5976	.7949	.9084
-.468	.9505	.6036	.7969	.9095
-.520	.9551	.6096	.7989	.9106
-.572	.9551	.6199	.8056	.9142
-.624	.9551	.6302	.8123	.9177
-.676	.9598	.6445	.8194	.9214
-.728	.9644	.6608	.8277	.9257
-.780	.9690	.6791	.8371	.9304
-.832	.9737	.7016	.8489	.9362
-.884	.9876	.7257	.8572	.9403
-.936	1.0015	.7561	.8689	.9458
-.988	1.0247	.7798	.8724	.9474
-1.040	1.0479	.8056	.8768	.9495

TABLE 7.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(g) x/D = 5.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 2480.55 N/m^2 (51.81 lb/ft^2);
q_∞ = 15 213.52 N/m^2 (317.74 lb/ft^2);
$p_{t,\infty}$ = 85 801.42 N/m^2 (1792.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0664	.6996	.8100	.9165
.988	.9969	.6821	.8272	.9254
.936	.9273	.6667	.8479	.9358
.884	.9273	.6502	.8374	.9306
.832	.9273	.6358	.8280	.9259
.780	.9227	.6196	.8194	.9215
.728	.9181	.6013	.8093	.9161
.676	.9088	.5749	.7954	.9087
.624	.8995	.5486	.7809	.9008
.572	.8949	.5261	.7668	.8928
.520	.8902	.5016	.7506	.8834
.468	.8902	.4789	.7335	.8730
.416	.8902	.4645	.7223	.8661
.364	.8810	.4649	.7265	.8687
.312	.8717	.4695	.7339	.8733
.260	.8717	.4777	.7403	.8772
.208	.8717	.4839	.7451	.8800
.156	.8949	.4911	.7408	.8775
.104	.9181	.5003	.7382	.8759
.052	.9181	.5148	.7488	.8823
0.000	.9181	.5333	.7622	.8901
-.104	.9181	.5642	.7839	.9024
-.156	.9320	.5718	.7833	.9021
-.208	.9459	.5774	.7813	.9010
-.260	.9227	.5825	.7946	.9083
-.312	.9366	.5840	.7896	.9056
-.364	.9366	.5881	.7924	.9071
-.416	.9273	.5927	.7994	.9109
-.468	.9273	.5968	.8022	.9124
-.520	.9273	.6051	.8078	.9153
-.572	.9273	.6133	.8133	.9182
-.624	.9273	.6216	.8187	.9211
-.676	.9273	.6340	.8268	.9252
-.728	.9273	.6505	.8375	.9306
-.780	.9273	.6670	.8481	.9358
-.832	.9273	.6856	.8598	.9415
-.884	.9320	.7081	.8716	.9471
-.936	.9366	.7326	.8844	.9530
-.988	.9505	.7527	.8899	.9554
-1.040	.9644	.7768	.8975	.9588

(h) x/D = 6.0; y/D = 0.0; $\alpha = 5^\circ$;

p_∞ = 2479.03 N/m^2 (51.78 lb/ft^2);
q_∞ = 15 204.18 N/m^2 (317.55 lb/ft^2);
$p_{t,\infty}$ = 85 748.75 N/m^2 (1790.90 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0485	.6980	.8159	.9196
.988	.9836	.6782	.8304	.9271
.936	.9186	.6626	.8493	.9364
.884	.9186	.6441	.8374	.9305
.832	.9186	.6277	.8266	.9251
.780	.9186	.6133	.8171	.9202
.728	.9186	.5968	.8060	.9144
.676	.9372	.5816	.7877	.9046
.624	.9557	.5601	.7656	.8921
.572	1.0114	.5494	.7370	.8752
.520	1.0671	.5324	.7064	.8560
.468	1.0764	.5217	.6962	.8493
.416	1.0856	.5192	.6915	.8462
.364	1.0764	.5237	.6975	.8502
.312	1.0671	.5303	.7050	.8551
.260	1.0671	.5345	.7077	.8568
.208	1.0671	.5386	.7104	.8586
.156	1.0996	.5412	.7016	.8529
.104	1.1320	.5480	.6957	.8490
.052	1.1274	.5626	.7064	.8560
0.000	1.1228	.5793	.7183	.8636
-.104	1.1228	.6083	.7361	.8746
-.156	1.1181	.6189	.7440	.8794
-.208	1.1135	.6273	.7506	.8833
-.260	1.0949	.6344	.7612	.8895
-.312	1.0903	.6366	.7642	.8913
-.364	1.0578	.6422	.7792	.8998
-.416	1.0671	.6439	.7768	.8985
-.468	1.0346	.6392	.7860	.9036
-.520	1.0021	.6385	.7982	.9103
-.572	.9789	.6396	.8083	.9156
-.624	.9557	.6365	.8161	.9197
-.676	.9418	.6433	.8265	.9251
-.728	.9279	.6563	.8410	.9324
-.780	.9233	.6689	.8512	.9373
-.832	.9186	.6835	.8626	.9428
-.884	.9233	.7040	.8732	.9478
-.936	.9279	.7285	.8861	.9537
-.988	.9372	.7487	.8938	.9572
-1.040	.9465	.7710	.9026	.9611

TABLE 7.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.41 × 10^6 PER METER (1.65 × 10^6 PER FOOT) – Continued

(i) x/D = 7.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 2479.03 N/m2 (51.78 lb/ft2);
q_∞ = 15 204.18 N/m2 (317.55 lb/ft2);
$p_{t,\infty}$ = 85 748.75 N/m2 (1790.90 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.3083	.7819	.7731	.8964
.988	1.2387	.7624	.7845	.9028
.936	1.1691	.7408	.7960	.9091
.884	1.1552	.7167	.7877	.9045
.832	1.1413	.6947	.7802	.9003
.780	1.1320	.6683	.7683	.8937
.728	1.1228	.6460	.7585	.8880
.676	1.1088	.6157	.7452	.8801
.624	1.0949	.5978	.7389	.8763
.572	1.0949	.5834	.7299	.8708
.520	1.0949	.5710	.7221	.8660
.468	1.0949	.5627	.7169	.8627
.416	1.0949	.5586	.7143	.8610
.364	1.0856	.5611	.7189	.8640
.312	1.0764	.5595	.7209	.8653
.260	1.0764	.5574	.7196	.8644
.208	1.0764	.5533	.7169	.8627
.156	1.0949	.5442	.7050	.8551
.104	1.1135	.5392	.6959	.8491
.052	1.1135	.5412	.6972	.8500
0.000	1.1135	.5536	.7051	.8552
-.104	1.1135	.5881	.7267	.8689
-.156	1.1135	.6046	.7369	.8751
-.208	1.1135	.6191	.7456	.8804
-.260	1.1042	.6298	.7552	.8861
-.312	1.1042	.6360	.7589	.8882
-.364	1.1135	.6397	.7580	.8877
-.416	1.0949	.6468	.7686	.8938
-.468	1.1042	.6525	.7687	.8939
-.520	1.1135	.6583	.7689	.8940
-.572	1.1228	.6682	.7715	.8955
-.624	1.1320	.6802	.7752	.8975
-.676	1.1459	.6961	.7794	.8999
-.728	1.1599	.7141	.7846	.9028
-.780	1.1506	.7351	.7993	.9108
-.832	1.1413	.7603	.8162	.9198
-.884	1.1599	.7843	.8223	.9229
-.936	1.1784	.8165	.8324	.9280
-.988	1.1970	.8425	.8389	.9313
-1.040	1.2155	.8705	.8463	.9349

(j) x/D = 8.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 2479.72 N/m2 (51.79 lb/ft2);
q_∞ = 15 208.43 N/m2 (317.63 lb/ft2);
$p_{t,\infty}$ = 85 772.69 N/m2 (1791.40 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2054	.7534	.7906	.9061
.988	1.1405	.7357	.8032	.9129
.936	1.0756	.7180	.8170	.9202
.884	1.0709	.6976	.8071	.9150
.832	1.0663	.6813	.7994	.9109
.780	1.0663	.6669	.7909	.9063
.728	1.0663	.6484	.7798	.9001
.676	1.0617	.6280	.7691	.8941
.624	1.0570	.6158	.7633	.8908
.572	1.0617	.6053	.7551	.8860
.520	1.0663	.5948	.7469	.8811
.468	1.0663	.5886	.7430	.8788
.416	1.0663	.5824	.7391	.8764
.364	1.0617	.5806	.7395	.8767
.312	1.0570	.5767	.7386	.8762
.260	1.0524	.5686	.7351	.8740
.208	1.0477	.5606	.7315	.8718
.156	1.0570	.5457	.7185	.8637
.104	1.0663	.5329	.7070	.8563
.052	1.0663	.5309	.7056	.8555
0.000	1.0663	.5329	.7070	.8563
-.104	1.0477	.5585	.7301	.8710
-.156	1.0477	.5750	.7408	.8775
-.208	1.0477	.5916	.7514	.8838
-.260	1.0431	.6021	.7598	.8887
-.312	1.0431	.6125	.7663	.8925
-.364	1.0477	.6185	.7683	.8936
-.416	1.0385	.6230	.7746	.8972
-.468	1.0431	.6311	.7778	.8990
-.520	1.0477	.6412	.7823	.9015
-.572	1.0570	.6491	.7836	.9023
-.624	1.0663	.6610	.7874	.9043
-.676	1.0709	.6753	.7941	.9080
-.728	1.0756	.6916	.8019	.9122
-.780	1.0709	.7104	.8145	.9189
-.832	1.0663	.7292	.8270	.9253
-.884	1.0756	.7515	.8359	.9298
-.936	1.0848	.7780	.8468	.9352
-.988	1.0987	.8001	.8533	.9384
-1.040	1.1126	.8263	.8618	.9424

TABLE 7.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 2.96 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(k) $x/D = 8.39$; $y/D = 0.0$; $\alpha = 5^\circ$;

$p_\infty = 2481.66\ \text{N/m}^2$ ($51.83\ \text{lb/ft}^2$);

$q_\infty = 15\ 220.31\ \text{N/m}^2$ ($317.88\ \text{lb/ft}^2$);

$p_{t,\infty} = 85\ 839.73\ \text{N/m}^2$ ($1792.80\ \text{lb/ft}^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1766	.7437	.7950	.9085
.988	1.1164	.7279	.8075	.9152
.936	1.0562	.7121	.8211	.9223
.884	1.0516	.6938	.8123	.9177
.832	1.0469	.6816	.8069	.9149
.780	1.0469	.6652	.7971	.9096
.728	1.0469	.6466	.7859	.9035
.676	1.0469	.6281	.7746	.8972
.624	1.0469	.6158	.7669	.8929
.572	1.0469	.6075	.7618	.8899
.520	1.0469	.5993	.7566	.8869
.468	1.0469	.5931	.7527	.8846
.416	1.0469	.5869	.7488	.8822
.364	1.0469	.5849	.7474	.8815
.312	1.0469	.5787	.7435	.8791
.260	1.0377	.5709	.7417	.8780
.208	1.0284	.5631	.7399	.8770
.156	1.0377	.5461	.7255	.8681
.104	1.0469	.5334	.7138	.8607
.052	1.0469	.5272	.7096	.8581
0.000	1.0469	.5292	.7110	.8589
-.104	1.0284	.5527	.7331	.8728
-.156	1.0330	.5690	.7422	.8783
-.208	1.0377	.5833	.7497	.8828
-.260	1.0238	.5942	.7619	.8899
-.312	1.0284	.6023	.7653	.8919
-.364	1.0330	.6083	.7674	.8931
-.416	1.0191	.6172	.7782	.8992
-.468	1.0238	.6252	.7815	.9011
-.520	1.0284	.6333	.7847	.9029
-.572	1.0330	.6434	.7892	.9053
-.624	1.0377	.6535	.7936	.9078
-.676	1.0469	.6676	.7985	.9104
-.728	1.0562	.6837	.8045	.9136
-.780	1.0469	.7006	.8180	.9207
-.832	1.0377	.7216	.8339	.9288
-.884	1.0423	.7441	.8449	.9343
-.936	1.0469	.7687	.8569	.9401
-.988	1.0608	.7887	.8623	.9427
-1.040	1.0747	.8108	.8686	.9456

TABLE 8.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT)

(a) $x/D = 1.0$; $y/D = 0.0$; $\alpha = 6^{\circ}$;

p_∞ = 1074.75 N/m^2 (22.45 lb/ft^2);
q_∞ = 11 738.20 N/m^2 (245.16 lb/ft^2);
$p_{t,\infty}$ = 152 627.90 N/m^2 (3187.70 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4548	.5225	.5993	.8353
.988	1.1660	.4816	.6427	.8623
.936	.8771	.4619	.7257	.9061
.884	.8237	.4392	.7302	.9082
.832	.7702	.4218	.7401	.9127
.780	.7060	.4020	.7546	.9192
.728	.6418	.3849	.7744	.9277
.676	.6097	.3697	.7786	.9294
.624	.5776	.3597	.7892	.9337
.572	.5669	.3547	.7909	.9344
.520	.5562	.3469	.7897	.9340
.468	.5028	.3349	.8161	.9442
.416	.4493	.3335	.8615	.9604
.364	.5242	.2996	.7561	.9199
.312	.5990	.1614	.5191	.7766
.260	.6204	.0267	.2074	.3954
.208	.6418	.0001	.0120	.0244
.156	.6632	0.0000	0.0000	0.0000
.104	.6846	0.0000	0.0000	0.0000
.052	.6525	.0209	.1789	.3464
0.000	.6204	.0230	.1927	.3703
-.104	.7274	.0475	.2556	.4729
-.156	.6739	.0973	.3801	.6405
-.208	.6204	.2813	.6733	.8796
-.260	.6418	.3555	.7443	.9146
-.312	.5883	.3488	.7700	.9258
-.364	.5883	.3408	.7611	.9220
-.416	.5562	.3496	.7928	.9352
-.468	.5562	.3496	.7928	.9352
-.520	.5562	.3549	.7988	.9376
-.572	.5669	.3653	.8028	.9391
-.624	.5776	.3731	.8037	.9395
-.676	.6311	.3851	.7812	.9305
-.728	.6846	.3999	.7643	.9234
-.780	.7381	.4173	.7519	.9180
-.832	.7916	.4427	.7478	.9162
-.884	.8558	.4705	.7415	.9133
-.936	.9199	.5090	.7438	.9144
-.988	1.0162	.5467	.7335	.9097
-1.040	1.1125	.6057	.7379	.9117

(b) $x/D = 1.5$; $y/D = 0.0$; $\alpha = 5^{\circ}$;

p_∞ = 1075.87 N/m^2 (22.47 lb/ft^2);
q_∞ = 11 750.35 N/m^2 (245.41 lb/ft^2);
$p_{t,\infty}$ = 152 785.90 N/m^2 (3191.00 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2179	.4504	.6081	.8411
.988	.9722	.4298	.6649	.8749
.936	.7265	.4171	.7577	.9206
.884	.6944	.3992	.7582	.9208
.832	.6624	.3893	.7667	.9244
.780	.6196	.3770	.7800	.9300
.728	.5769	.3674	.7980	.9372
.676	.5662	.3596	.7970	.9368
.624	.5555	.3546	.7989	.9376
.572	.5449	.3522	.8039	.9396
.520	.5342	.3497	.8092	.9416
.468	.6624	.3493	.7262	.9063
.416	.7906	.4155	.7250	.9057
.364	1.0790	.5232	.6963	.8916
.312	1.3675	.4787	.5916	.8303
.260	1.2713	.3634	.5347	.7890
.208	1.1752	.2641	.4740	.7377
.156	1.3034	.1712	.3624	.6196
.104	1.4316	.2219	.3937	.6561
.052	1.4957	.3280	.4683	.7325
0.000	1.5598	.4497	.5369	.7908
-.104	1.8803	.5967	.5633	.8105
-.156	1.6025	.5983	.6110	.8430
-.208	1.3247	.5465	.6423	.8621
-.260	1.2927	.4511	.5908	.8297
-.312	1.0149	.4367	.6560	.8700
-.364	.9508	.4383	.6789	.8826
-.416	.7051	.3696	.7240	.9052
-.468	.6410	.3632	.7527	.9184
-.520	.5769	.3620	.7922	.9349
-.572	.5555	.3626	.8079	.9411
-.624	.5342	.3657	.8275	.9484
-.676	.5769	.3700	.8009	.9384
-.728	.6196	.3797	.7828	.9311
-.780	.6410	.3925	.7825	.9310
-.832	.6624	.4080	.7848	.9320
-.884	.6944	.4285	.7856	.9323
-.936	.7265	.4571	.7932	.9353
-.988	.7799	.4851	.7887	.9335
-1.040	.8333	.5238	.7929	.9352

TABLE 8.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER METER) – Continued

(c) $x/D = 2.0$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 1075.36\ N/m^2$ ($22.46\ lb/ft^2$);
$q_\infty = 11\ 744.83\ N/m^2$ ($245.30\ lb/ft^2$);
$p_{t,\infty} = 152\ 714.08\ N/m^2$ ($3189.50\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.1327	.4260	.6133	.8444
.988	.8976	.4105	.6762	.8811
.936	.6625	.4002	.7772	.9288
.884	.6412	.3900	.7799	.9300
.832	.6198	.3799	.7829	.9312
.780	.5877	.3753	.7991	.9377
.728	.5557	.3681	.8139	.9434
.676	.5877	.3673	.7905	.9343
.624	.6198	.4172	.8205	.9458
.572	.9831	.5285	.7332	.9096
.520	1.3464	.5275	.6259	.8523
.468	1.3464	.5222	.6228	.8503
.416	1.3464	.5008	.6099	.8422
.364	1.3037	.4645	.5969	.8338
.312	1.2609	.4121	.5717	.8165
.260	1.2289	.3406	.5265	.7826
.208	1.1968	.3012	.5017	.7621
.156	1.2823	.3070	.4893	.7515
.104	1.3678	.3558	.5100	.7691
.052	1.4105	.4136	.5415	.7943
0.000	1.4533	.4794	.5743	.8184
-.104	1.5601	.5436	.5903	.8293
-.156	1.6029	.5532	.5875	.8275
-.208	1.6456	.5548	.5806	.8228
-.260	1.2182	.5681	.6829	.8847
-.312	1.2609	.5724	.6737	.8798
-.364	1.2396	.5649	.6751	.8805
-.416	.8762	.4323	.7024	.8947
-.468	.8549	.4275	.7072	.8971
-.520	.8335	.4334	.7211	.9039
-.572	.7908	.4504	.7547	.9193
-.624	.7480	.3981	.7295	.9078
-.676	.6839	.3783	.7437	.9144
-.728	.6198	.3825	.7856	.9323
-.780	.6198	.3905	.7938	.9356
-.832	.6198	.4012	.8046	.9398
-.884	.6305	.4170	.8132	.9431
-.936	.6412	.4380	.8266	.9481
-.988	.6839	.4610	.8210	.9460
-1.040	.7266	.4893	.8206	.9459

(d) $x/D = 2.5$; $y/D = 0.0$; $\alpha = 5^o$;

$p_\infty = 1076.14\ N/m^2$ ($22.48\ lb/ft^2$);
$q_\infty = 11\ 753.30\ N/m^2$ ($245.47\ lb/ft^2$);
$p_{t,\infty} = 152\ 824.21\ N/m^2$ ($3191.80\ lb/ft^2$)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0899	.4231	.6230	.8505
.988	.8549	.4076	.6905	.8886
.936	.6198	.4026	.8060	.9404
.884	.6198	.3947	.7980	.9372
.832	.6198	.3893	.7926	.9351
.780	.8655	.5164	.7724	.9268
.728	1.1113	.5370	.6952	.8910
.676	1.1434	.5283	.6797	.8830
.624	1.1754	.5168	.6631	.8739
.572	1.1968	.5083	.6517	.8675
.520	1.2182	.4998	.6405	.8610
.468	1.2075	.4841	.6332	.8566
.416	1.1968	.4524	.6148	.8453
.364	1.1647	.4105	.5937	.8316
.312	1.1327	.3713	.5726	.8172
.260	1.1006	.3375	.5537	.8035
.208	1.0686	.3383	.5627	.8101
.156	1.1327	.3553	.5601	.8082
.104	1.1968	.3830	.5657	.8123
.052	1.2182	.4172	.5852	.8259
0.000	1.2395	.4540	.6052	.8392
-.104	1.2823	.4967	.6224	.8501
-.156	1.3143	.5012	.6175	.8471
-.208	1.3464	.5058	.6129	.8441
-.260	1.2930	.5098	.6279	.8535
-.312	1.3250	.5143	.6230	.8505
-.364	1.3250	.5143	.6230	.8505
-.416	1.3037	.5255	.6349	.8577
-.468	1.3037	.5335	.6397	.8606
-.520	1.3037	.5442	.6461	.8643
-.572	1.0365	.4708	.6739	.8799
-.624	.7694	.4319	.7493	.9169
-.676	.8014	.4392	.7403	.9128
-.728	.8335	.4571	.7405	.9129
-.780	.7266	.4810	.8136	.9432
-.832	.6198	.4142	.8175	.9447
-.884	.6198	.4196	.8228	.9467
-.936	.6198	.4382	.8409	.9532
-.988	.6411	.4564	.8437	.9542
-1.040	.6625	.4798	.8510	.9568

TABLE 8.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42 × 10^6 PER METER (1.65 × 10^6 PER FOOT) – Continued

(e) x/D = 3.0; y/D = 0.0; α = 5°;

p_∞ = 1074.89 N/m² (22.45 lb/ft²);
q_∞ = 11 739.67 N/m² (245.19 lb/ft²);
$p_{t,\infty}$ = 152 647.05 N/m² (3188.10 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.0484	.4272	.6384	.8598
.988	1.0484	.5392	.7171	.9020
.936	1.0484	.5578	.7294	.9078
.884	1.0591	.5442	.7168	.9018
.832	1.0698	.5307	.7043	.8957
.780	1.0698	.5200	.6972	.8921
.728	1.0698	.5173	.6954	.8912
.676	1.0698	.5040	.6864	.8865
.624	1.0698	.4907	.6772	.8817
.572	1.0698	.4774	.6680	.8767
.520	1.0698	.4587	.6548	.8693
.468	1.0377	.4355	.6478	.8653
.416	1.0056	.4043	.6341	.8572
.364	.9949	.3726	.6119	.8435
.312	.9842	.3515	.5976	.8342
.260	.9628	.3440	.5977	.8343
.208	.9414	.3526	.6120	.8435
.156	.9842	.3675	.6111	.8430
.104	1.0270	.3824	.6102	.8424
.052	1.0377	.4035	.6236	.8508
0.000	1.0484	.4272	.6384	.8598
−.104	1.0698	.4571	.6537	.8686
−.156	1.0912	.4646	.6525	.8680
−.208	1.1126	.4694	.6495	.8663
−.260	1.0805	.4729	.6615	.8731
−.312	1.1019	.4777	.6584	.8713
−.364	1.1019	.4804	.6603	.8724
−.416	1.0912	.4860	.6673	.8763
−.468	1.0912	.4913	.6710	.8783
−.520	1.0912	.5020	.6783	.8822
−.572	1.1126	.5095	.6767	.8814
−.624	1.1340	.5196	.6769	.8815
−.676	1.1340	.5357	.6873	.8870
−.728	1.1340	.5570	.7009	.8939
−.780	.9521	.5481	.7587	.9210
−.832	.7703	.4698	.7810	.9304
−.884	.7810	.4909	.7928	.9352
−.936	.7917	.5226	.8125	.9428
−.988	.7061	.5540	.8858	.9683
−1.040	.6205	.4867	.8857	.9682

(f) x/D = 4.0; y/D = 0.0; α = 5°;

p_∞ = 1074.62 N/m² (22.44 lb/ft²);
q_∞ = 11 736.73 N/m² (245.13 lb/ft²);
$p_{t,\infty}$ = 152 608.75 N/m² (3187.30 lb/ft²)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4320	.5598	.6253	.8518
.988	1.2289	.5382	.6618	.8732
.936	1.0259	.5245	.7150	.9009
.884	1.0152	.5061	.7060	.8965
.832	1.0045	.4957	.7024	.8947
.780	.9831	.4828	.7008	.8939
.728	.9618	.4700	.6991	.8930
.676	.9511	.4516	.6891	.8879
.624	.9404	.4385	.6829	.8847
.572	.9404	.4225	.6703	.8779
.520	.9404	.4012	.6531	.8683
.468	.9083	.3806	.6473	.8650
.416	.8763	.3600	.6410	.8613
.364	.8656	.3470	.6331	.8566
.312	.8549	.3446	.6348	.8577
.260	.8442	.3448	.6391	.8602
.208	.8335	.3531	.6508	.8670
.156	.8656	.3576	.6428	.8624
.104	.8977	.3675	.6399	.8606
.052	.8977	.3755	.6468	.8647
0.000	.8977	.3889	.6582	.8712
−.104	.8977	.4139	.6790	.8826
−.156	.9190	.4214	.6771	.8816
−.208	.9404	.4289	.6753	.8806
−.260	.9190	.4321	.6857	.8861
−.312	.9404	.4342	.6795	.8829
−.364	.9404	.4396	.6837	.8851
−.416	.9404	.4422	.6858	.8862
−.468	.9404	.4503	.6919	.8894
−.520	.9404	.4556	.6960	.8915
−.572	.9618	.4658	.6959	.8914
−.624	.9831	.4733	.6938	.8904
−.676	.9938	.4837	.6976	.8923
−.728	1.0045	.4995	.7052	.8961
−.780	1.0045	.5182	.7182	.9025
−.832	1.0045	.5369	.7311	.9086
−.884	1.0366	.5602	.7351	.9105
−.936	1.0686	.5968	.7473	.9160
−.988	1.0900	.6284	.7593	.9212
−1.040	1.1114	.6653	.7737	.9274

TABLE 8.- VARIATION OF p_1/p_∞, q_1/q_∞, M_1/M_∞, AND V_1/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(g) x/D = 5.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 1074.15 N/m^2 (22.43 lb/ft^2);
q_∞ = 11 731.57 N/m^2 (245.02 lb/ft^2);
$p_{t,\infty}$ = 152 541.71 N/m^2 (3185.90 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.3280	.5173	.6241	.8511
.988	1.1138	.4985	.6690	.8772
.936	.8996	.4878	.7363	.9110
.884	.8889	.4747	.7308	.9084
.832	.8782	.4643	.7271	.9067
.780	.8675	.4512	.7212	.9039
.728	.8568	.4408	.7173	.9020
.676	.8461	.4224	.7065	.8968
.624	.8354	.4093	.7000	.8935
.572	.8247	.3935	.6908	.8888
.520	.8140	.3751	.6788	.8825
.468	.8032	.3620	.6713	.8785
.416	.7925	.3489	.6635	.8742
.364	.7925	.3463	.6610	.8728
.312	.7925	.3463	.6610	.8728
.260	.7818	.3492	.6683	.8768
.208	.7711	.3521	.6758	.8809
.156	.7925	.3569	.6711	.8784
.104	.8140	.3618	.6667	.8759
.052	.8140	.3698	.6740	.8799
0.000	.8140	.3778	.6813	.8838
-.104	.8140	.3974	.6987	.8929
-.156	.8354	.4049	.6962	.8916
-.208	.8568	.4097	.6915	.8892
-.260	.8247	.4158	.7101	.8985
-.312	.8461	.4153	.7006	.8938
-.364	.8461	.4207	.7051	.8961
-.416	.8354	.4236	.7121	.8995
-.468	.8354	.4290	.7166	.9017
-.520	.8354	.4343	.7210	.9038
-.572	.8461	.4394	.7206	.9036
-.624	.8568	.4472	.7224	.9045
-.676	.8568	.4552	.7289	.9075
-.728	.8568	.4686	.7395	.9125
-.780	.8568	.4819	.7500	.9172
-.832	.8568	.4980	.7624	.9226
-.884	.8889	.5159	.7618	.9223
-.936	.9211	.5419	.7670	.9246
-.988	.9318	.5683	.7810	.9304
-1.040	.9425	.6028	.7998	.9379

(h) x/D = 6.0; y/D = 0.0; $\alpha = 5^o$;

p_∞ = 1075.33 N/m^2 (22.46 lb/ft^2);
q_∞ = 11 744.46 N/m^2 (245.29 lb/ft^2);
$p_{t,\infty}$ = 152 709.29 N/m^2 (3189.40 lb/ft^2)

z/D	p_1/p_∞	q_1/q_∞	M_1/M_∞	V_1/V_∞
1.040	1.3029	.5060	.6232	.8506
.988	1.1000	.4897	.6672	.8762
.936	.8971	.4814	.7325	.9093
.884	.8864	.4683	.7269	.9066
.832	.8757	.4553	.7210	.9038
.780	.8543	.4425	.7197	.9032
.728	.8330	.4297	.7182	.9025
.676	.8330	.4137	.7047	.8959
.624	.8330	.3977	.6910	.8889
.572	.8330	.3844	.6793	.8828
.520	.8330	.3711	.6675	.8764
.468	.8223	.3607	.6623	.8735
.416	.8116	.3530	.6595	.8719
.364	.8116	.3530	.6595	.8719
.312	.8116	.3530	.6595	.8719
.260	.8010	.3559	.6666	.8759
.208	.7903	.3588	.6738	.8798
.156	.8010	.3639	.6740	.8799
.104	.8116	.3663	.6718	.8787
.052	.8223	.3740	.6744	.8802
0.000	.8330	.3791	.6746	.8803
-.104	.8330	.3933	.6872	.8869
-.156	.8330	.3987	.6918	.8893
-.208	.8330	.4040	.6964	.8917
-.260	.8330	.4067	.6987	.8929
-.312	.8330	.4093	.7010	.8940
-.364	.8330	.4147	.7056	.8963
-.416	.8330	.4147	.7056	.8963
-.468	.8330	.4200	.7101	.8985
-.520	.8330	.4227	.7123	.8996
-.572	.8330	.4280	.7168	.9018
-.624	.8330	.4360	.7235	.9050
-.676	.8330	.4414	.7279	.9071
-.728	.8330	.4520	.7367	.9112
-.780	.8330	.4654	.7475	.9160
-.832	.8330	.4814	.7602	.9216
-.884	.8543	.4969	.7626	.9227
-.936	.8757	.5204	.7709	.9262
-.988	.8864	.5441	.7835	.9314
-1.040	.8971	.5732	.7994	.9378

TABLE 8.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Continued

(i) x/D = 7.0; y/D = 0.0; $\alpha = 5^{\circ}$;

p_∞ = 1075.60 N/m^2 (22.46 lb/ft^2);
q_∞ = 11 747.40 N/m^2 (245.35 lb/ft^2);
$p_{t,\infty}$ = 152 747.60 N/m^2 (3190.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2820	.4996	.6242	.8512
.988	1.0790	.4859	.6711	.8783
.936	.8761	.4749	.7363	.9110
.884	.8654	.4591	.7284	.9073
.832	.8547	.4487	.7246	.9055
.780	.8440	.4383	.7206	.9036
.728	.8333	.4252	.7143	.9006
.676	.8333	.4066	.6985	.8927
.624	.8333	.3932	.6869	.8868
.572	.8333	.3799	.6752	.8806
.520	.8333	.3692	.6656	.8753
.468	.8226	.3588	.6604	.8724
.416	.8120	.3537	.6600	.8722
.364	.8120	.3537	.6600	.8722
.312	.8120	.3537	.6600	.8722
.260	.8013	.3566	.6671	.8762
.208	.7906	.3596	.6744	.8801
.156	.8013	.3620	.6721	.8789
.104	.8120	.3670	.6724	.8790
.052	.8226	.3721	.6726	.8792
0.000	.8333	.3799	.6752	.8806
-.104	.8120	.3937	.6964	.8917
-.156	.8226	.3961	.6939	.8904
-.208	.8333	.4039	.6962	.8916
-.260	.8226	.4041	.7009	.8940
-.312	.8333	.4066	.6985	.8927
-.364	.8333	.4092	.7008	.8939
-.416	.8333	.4146	.7053	.8962
-.468	.8333	.4146	.7053	.8962
-.520	.8333	.4226	.7121	.8995
-.572	.8333	.4252	.7143	.9006
-.624	.8333	.4306	.7188	.9028
-.676	.8333	.4386	.7255	.9059
-.728	.8333	.4466	.7321	.9090
-.780	.8333	.4573	.7407	.9130
-.832	.8333	.4706	.7515	.9178
-.884	.8333	.4893	.7662	.9242
-.936	.8333	.5106	.7828	.9311
-.988	.8440	.5343	.7957	.9363
-1.040	.8547	.5607	.8100	.9419

(j) x/D = 8.0; y/D = 0.0; $\alpha = 5^{\circ}$;

p_∞ = 1074.59 N/m^2 (22.44 lb/ft^2);
q_∞ = 11 736.36 N/m^2 (245.12 lb/ft^2);
$p_{t,\infty}$ = 152 603.96 N/m^2 (3187.20 lb/ft^2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.2605	.4974	.6282	.8536
.988	1.0682	.4834	.6727	.8792
.936	.8759	.4775	.7383	.9119
.884	.8866	.4692	.7275	.9069
.832	.8973	.4663	.7209	.9038
.780	.9293	.4735	.7138	.9003
.728	.9614	.4674	.6973	.8921
.676	1.0148	.4581	.6719	.8788
.624	1.0682	.4514	.6501	.8666
.572	1.0895	.4429	.6375	.8593
.520	1.1109	.4290	.6214	.8495
.468	1.1002	.4212	.6188	.8478
.416	1.0895	.4162	.6180	.8474
.364	1.0789	.4164	.6213	.8494
.312	1.0682	.4167	.6246	.8514
.260	1.0575	.4170	.6279	.8535
.208	1.0468	.4199	.6333	.8568
.156	1.0789	.4218	.6253	.8518
.104	1.1109	.4263	.6195	.8483
.052	1.1002	.4319	.6266	.8526
0.000	1.0895	.4375	.6337	.8570
-.104	1.0895	.4514	.6437	.8629
-.156	1.1002	.4592	.6460	.8642
-.208	1.1109	.4642	.6464	.8645
-.260	1.0789	.4704	.6603	.8724
-.312	1.0895	.4728	.6587	.8715
-.364	1.0895	.4781	.6624	.8736
-.416	1.0682	.4813	.6713	.8784
-.468	1.0682	.4840	.6731	.8795
-.520	1.0682	.4893	.6768	.8815
-.572	1.0575	.4923	.6823	.8844
-.624	1.0468	.4925	.6859	.8863
-.676	.9934	.4858	.6993	.8932
-.728	.9400	.4818	.7159	.9014
-.780	.8866	.4831	.7382	.9118
-.832	.8332	.4897	.7667	.9244
-.884	.8332	.4951	.7708	.9262
-.936	.8332	.5111	.7832	.9313
-.988	.8332	.5351	.8014	.9386
-1.040	.8332	.5618	.8212	.9461

TABLE 8.- VARIATION OF p_l/p_∞, q_l/q_∞, M_l/M_∞, AND V_l/V_∞ WITH z/D AT THE CENTER OF WAKE OF THE VIKING ENTRY VEHICLE AT A MACH NUMBER OF 3.95 AND A REYNOLDS NUMBER OF 5.42×10^6 PER METER (1.65×10^6 PER FOOT) – Concluded

(k) x/D = 8.39; y/D = 0.0; $\alpha = 5^\circ$;
p_∞ = 1075.23 N/m2 (22.46 lb/ft2);
q_∞ = 11 743.35 N/m2 (245.27 lb/ft2);
$p_{t,\infty}$ = 152 694.93 N/m2 (3189.10 lb/ft2)

z/D	p_l/p_∞	q_l/q_∞	M_l/M_∞	V_l/V_∞
1.040	1.4126	.5867	.6444	.8633
.988	1.2735	.5821	.6761	.8810
.936	1.1344	.5668	.7069	.8969
.884	1.1344	.5455	.6935	.8902
.832	1.1344	.5295	.6832	.8848
.780	1.1237	.5111	.6744	.8802
.728	1.1130	.4927	.6653	.8752
.676	1.1023	.4716	.6541	.8689
.624	1.0916	.4559	.6462	.8644
.572	1.0916	.4425	.6367	.8588
.520	1.0916	.4345	.6309	.8553
.468	1.0809	.4268	.6284	.8538
.416	1.0702	.4217	.6277	.8534
.364	1.0595	.4220	.6311	.8554
.312	1.0488	.4223	.6345	.8575
.260	1.0488	.4223	.6345	.8575
.208	1.0488	.4223	.6345	.8575
.156	1.0702	.4217	.6277	.8534
.104	1.0916	.4212	.6212	.8493
.052	1.0916	.4265	.6251	.8517
0.000	1.0916	.4319	.6290	.8541
-.104	1.0916	.4457	.6390	.8601
-.156	1.0916	.4537	.6447	.8635
-.208	1.0916	.4618	.6504	.8668
-.260	1.0702	.4676	.6610	.8728
-.312	1.0702	.4730	.6648	.8749
-.364	1.0702	.4756	.6667	.8759
-.416	1.0488	.4788	.6757	.8808
-.468	1.0488	.4842	.6795	.8829
-.520	1.0488	.4868	.6813	.8838
-.572	1.0595	.4919	.6814	.8839
-.624	1.0702	.4997	.6833	.8849
-.676	1.0809	.5074	.6852	.8859
-.728	1.0916	.5205	.6905	.8887
-.780	1.0702	.5344	.7066	.8968
-.832	1.0488	.5536	.7265	.9064
-.884	1.0488	.5749	.7404	.9129
-.936	1.0488	.5989	.7557	.9197
-.988	.9631	.6064	.7934	.9354
-1.040	.8775	.5844	.8161	.9442

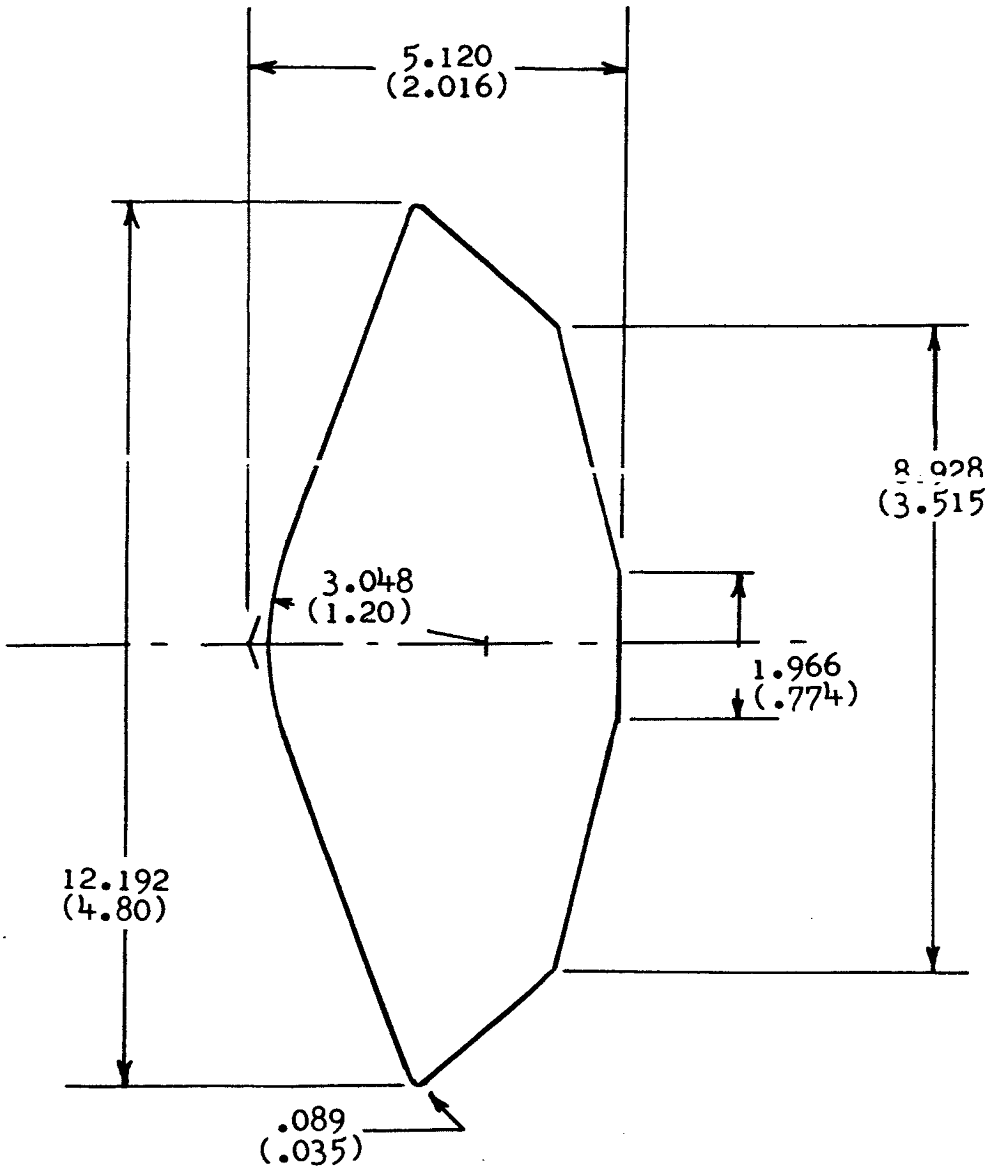


Figure 1.- Viking Entry Vehicle used in wake survey. Dimensions are in centimeters (inches).

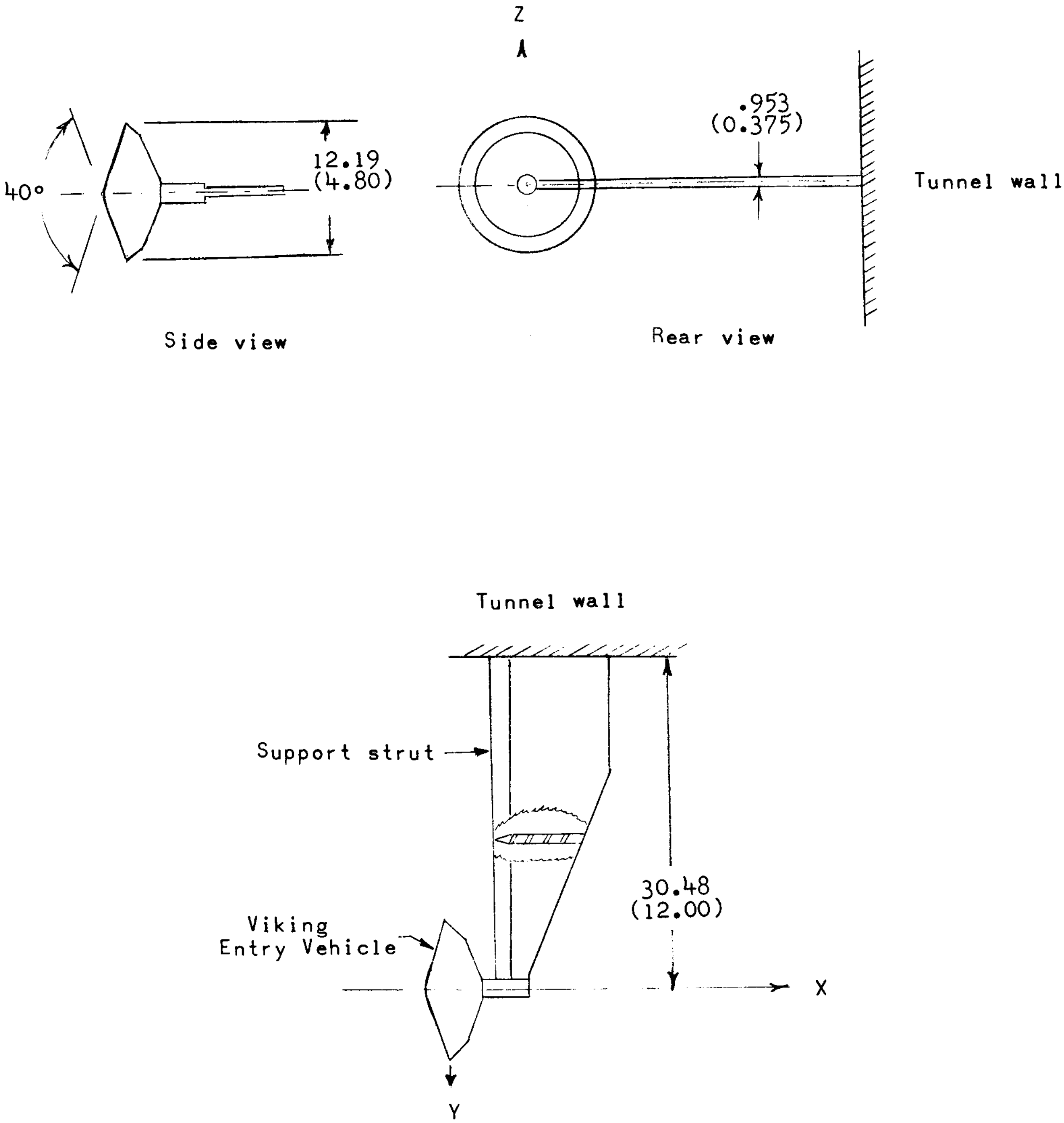


Figure 2.- Model and model support system. Dimensions are in centimeters (inches).

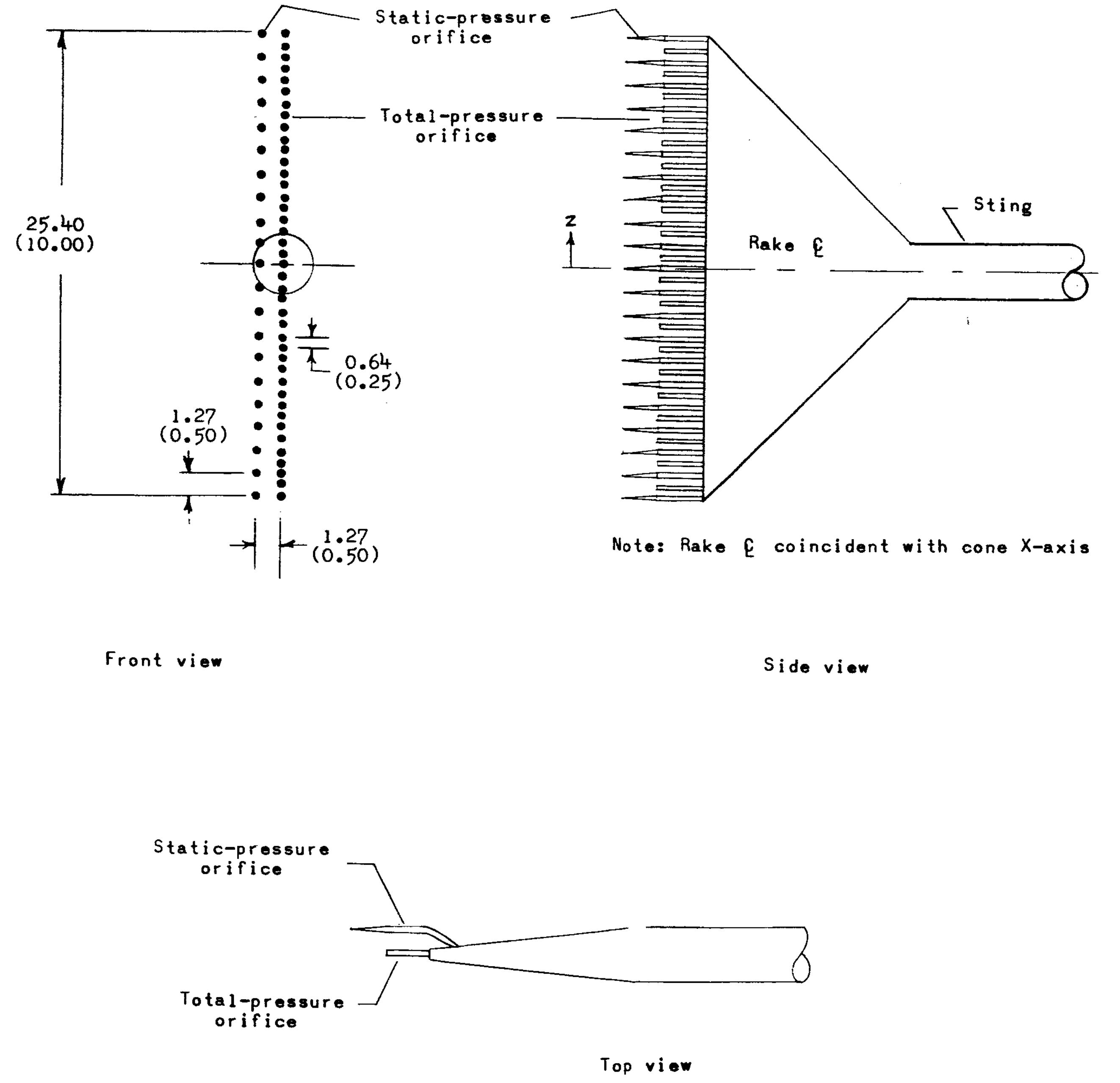


Figure 3.- Pressure rake used in wake survey. Dimensions are in centimeters (inches).

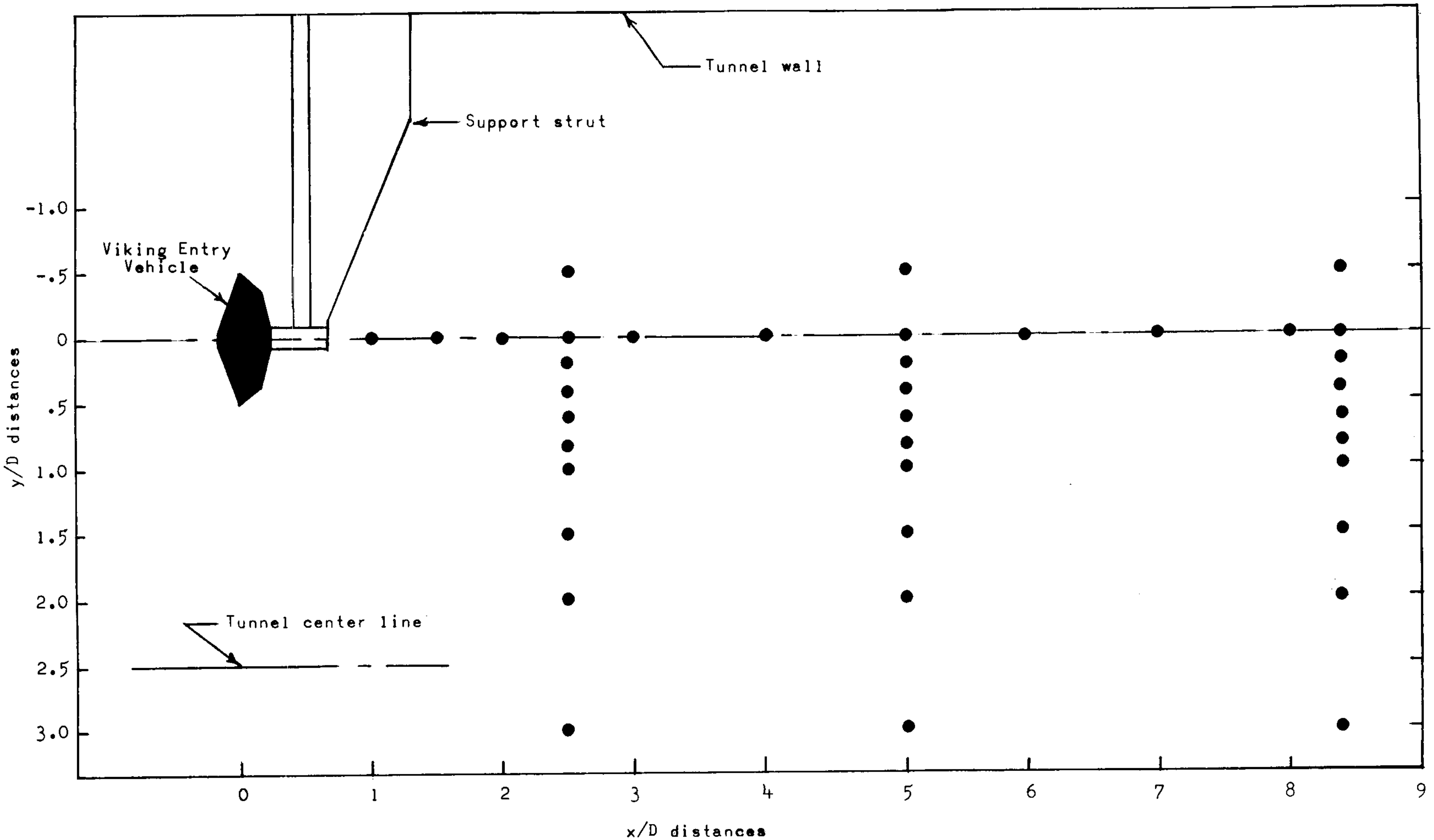
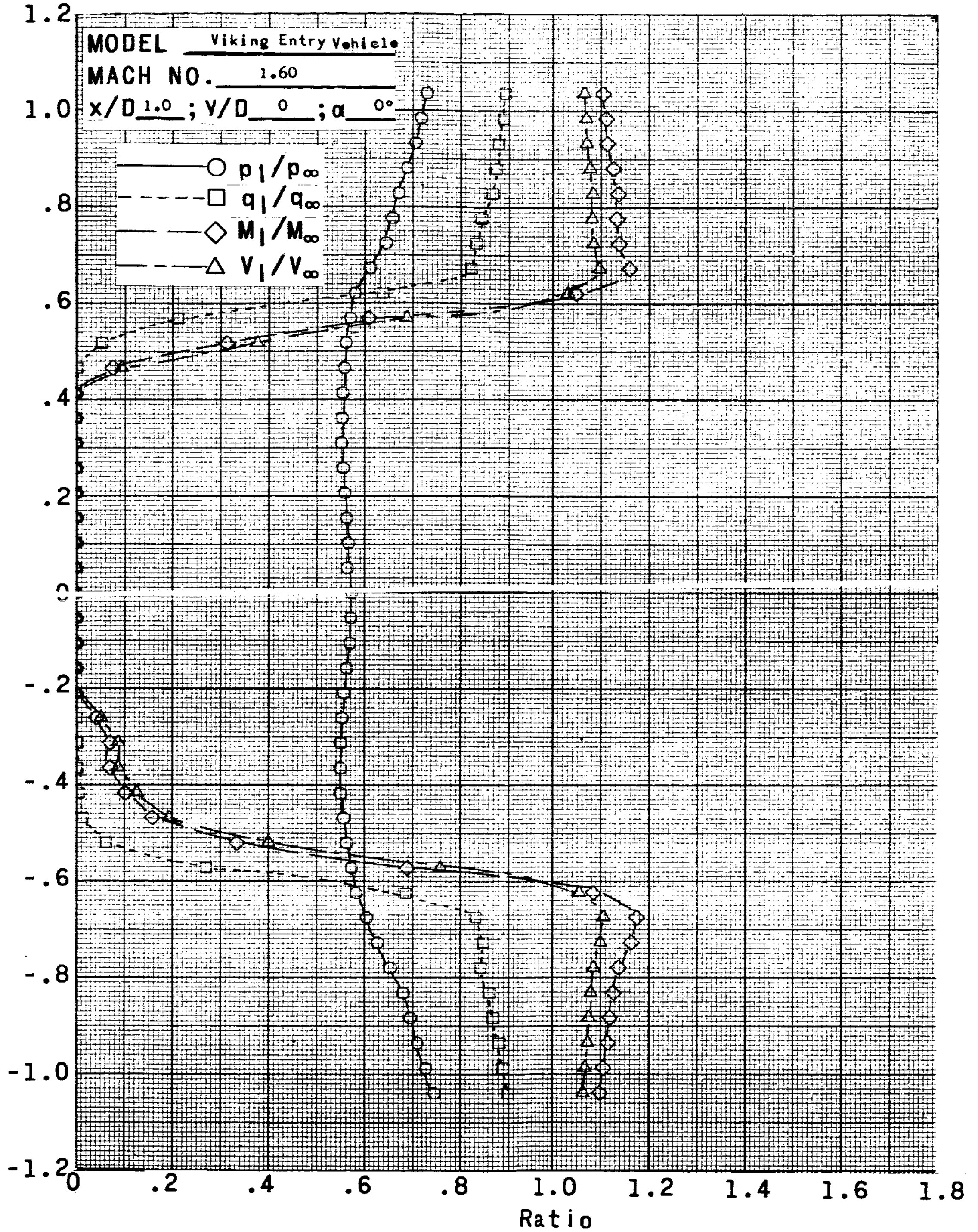
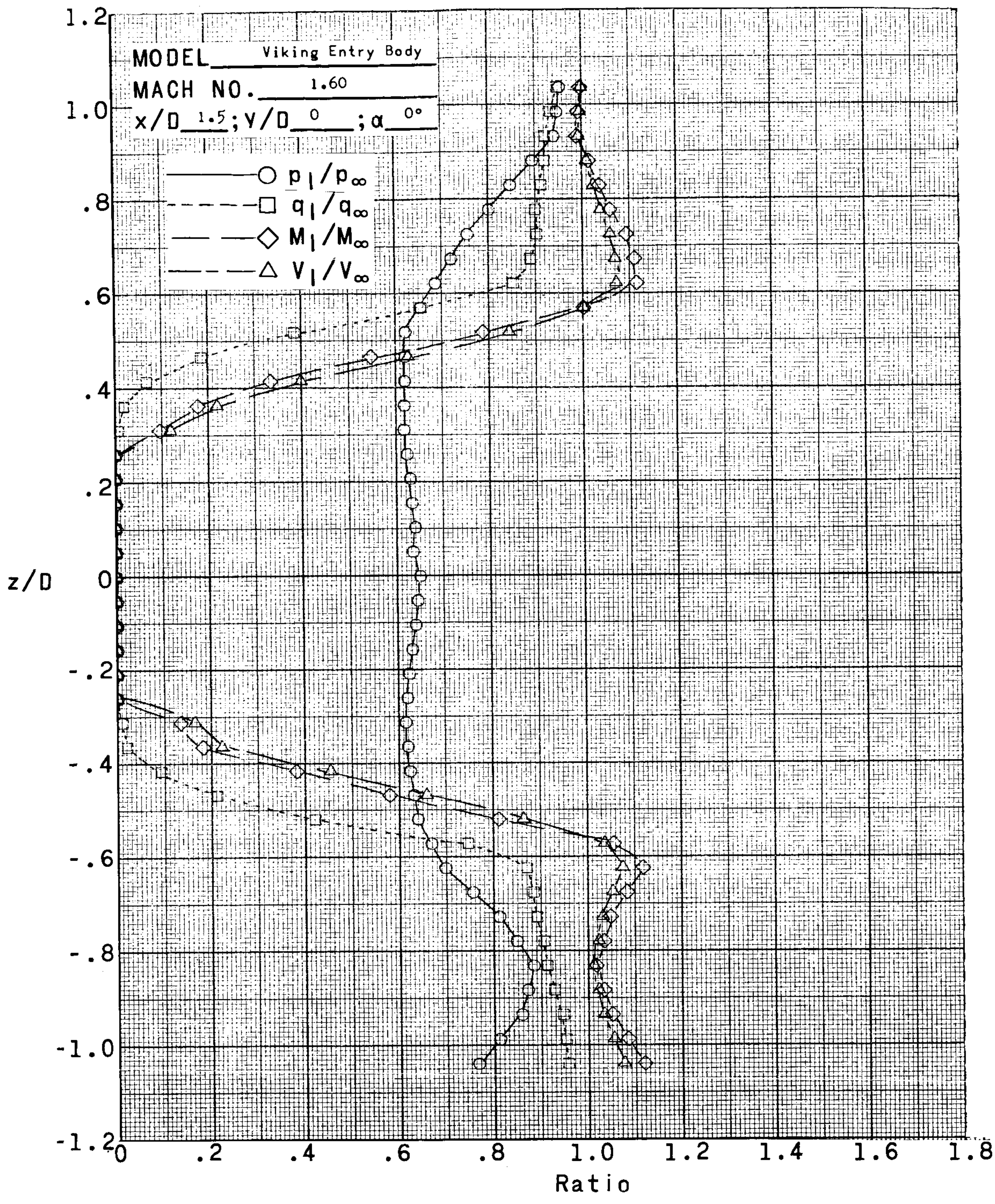


Figure 4.- Schematic representation of lateral and longitudinal stations used in wake survey.



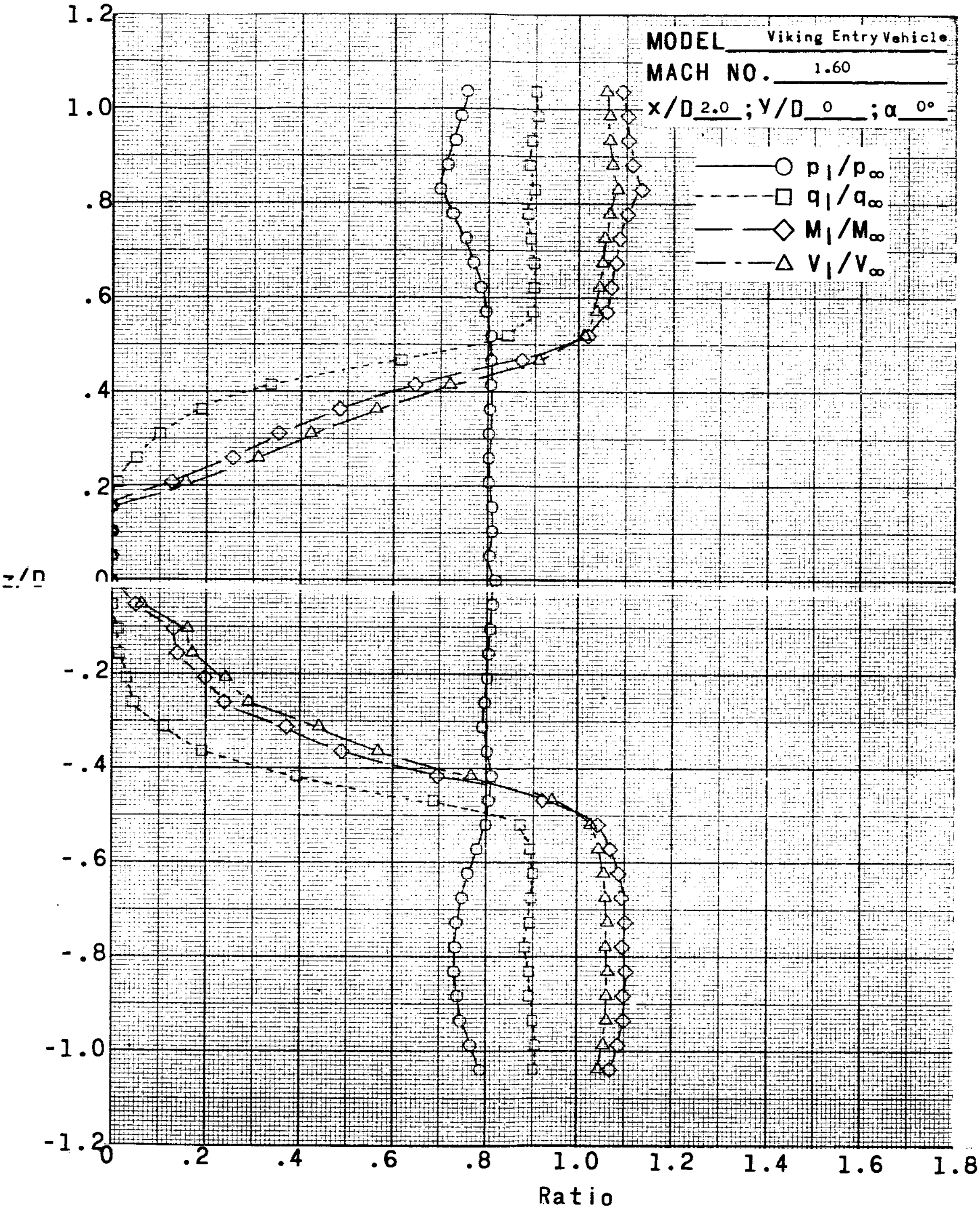
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 0^{\circ}$.

Figure 5.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D in the wake of the Viking Entry Vehicle at a Mach number of 1.60 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



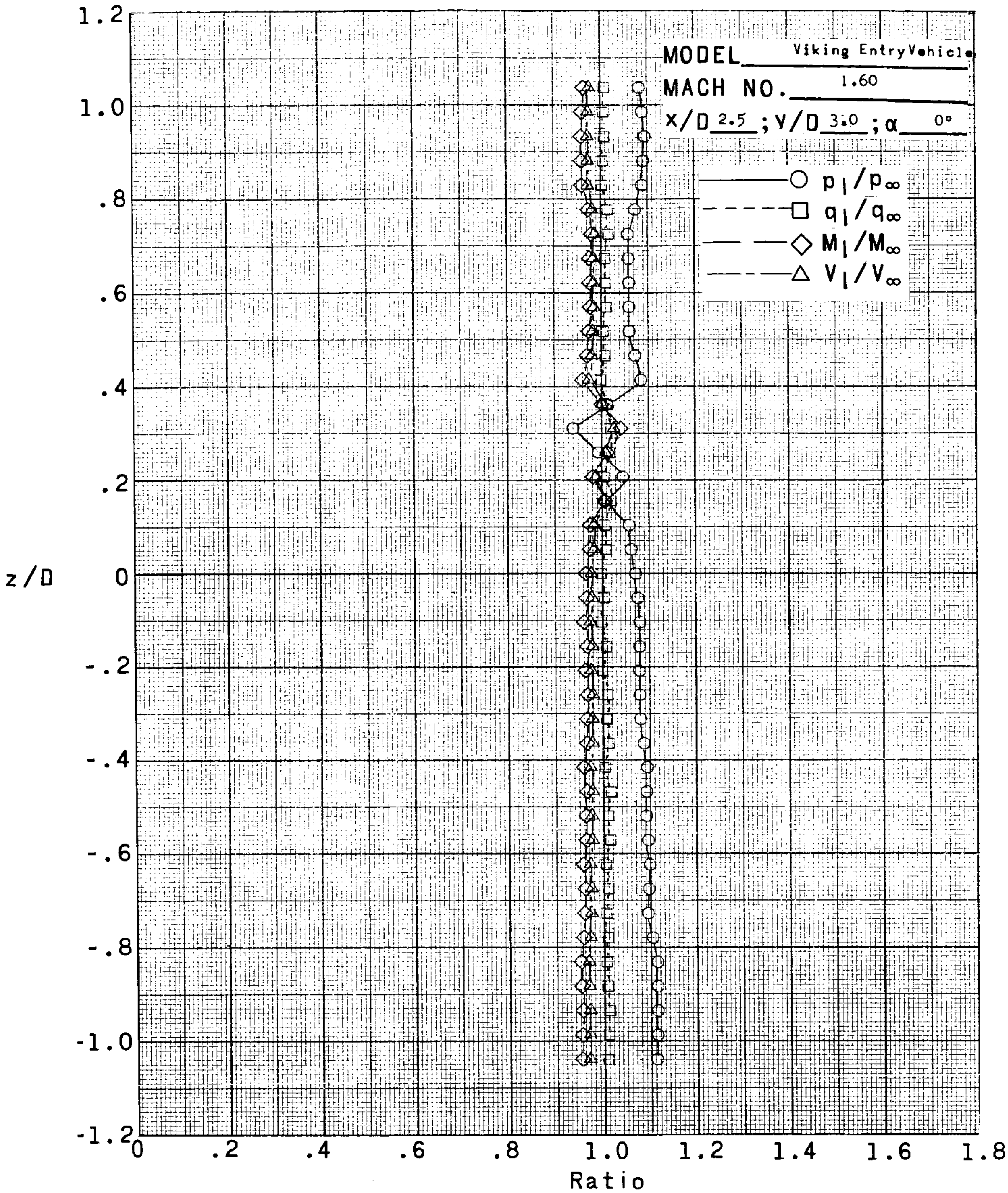
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



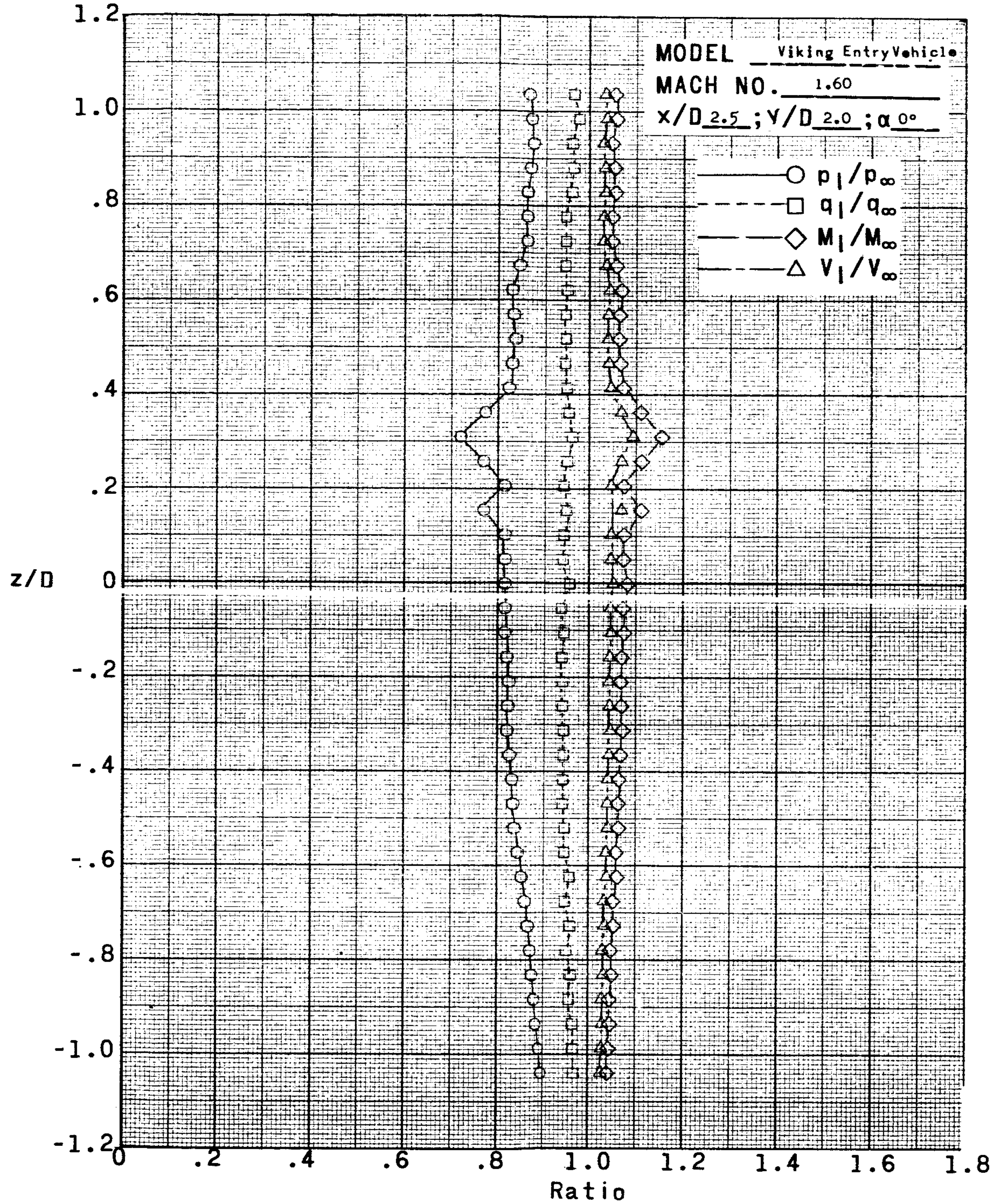
(c) x/D = 2.0; y/D = 0; α = 0°.

Figure 5.- Continued.



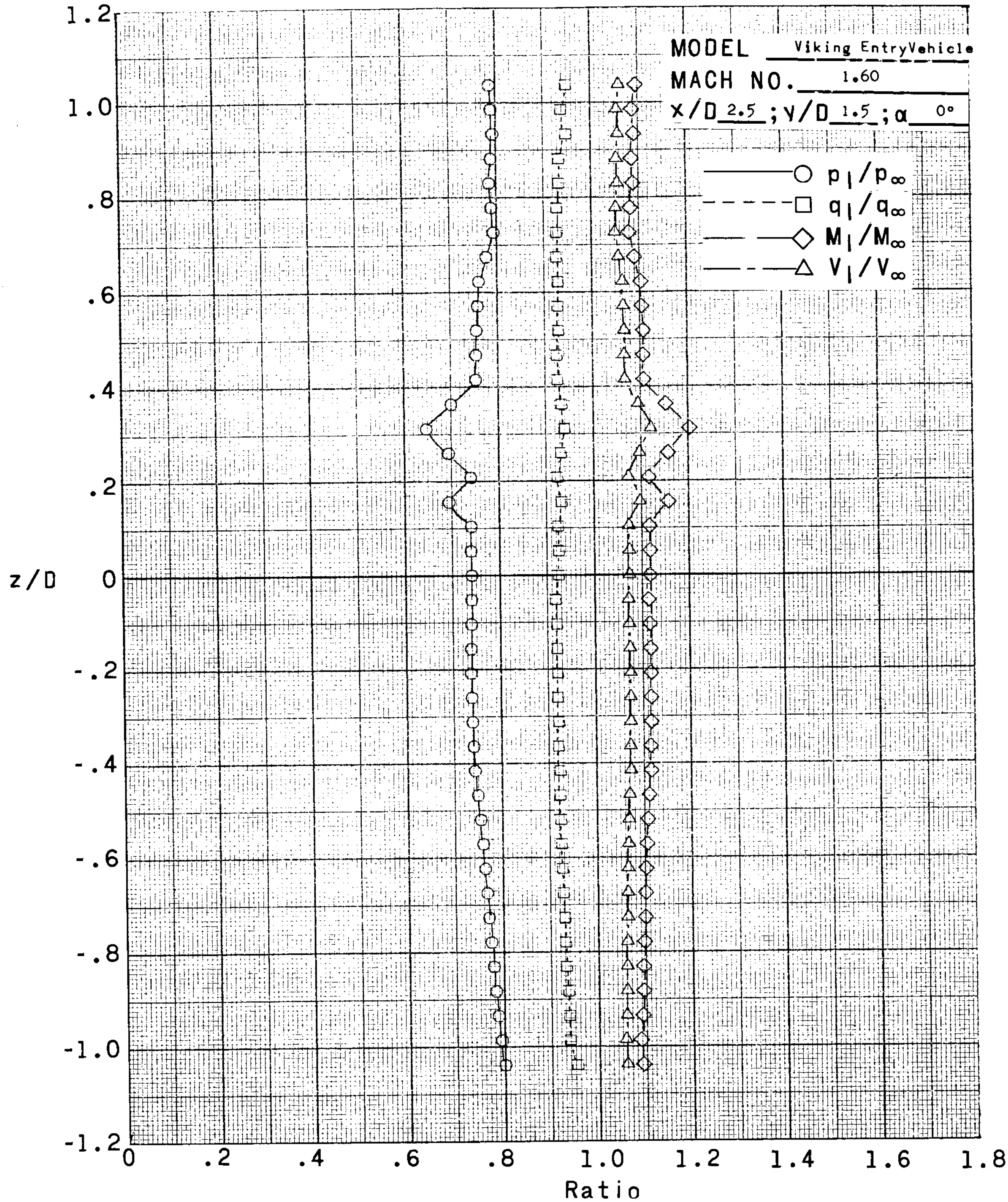
(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^0$.

Figure 5.- Continued.



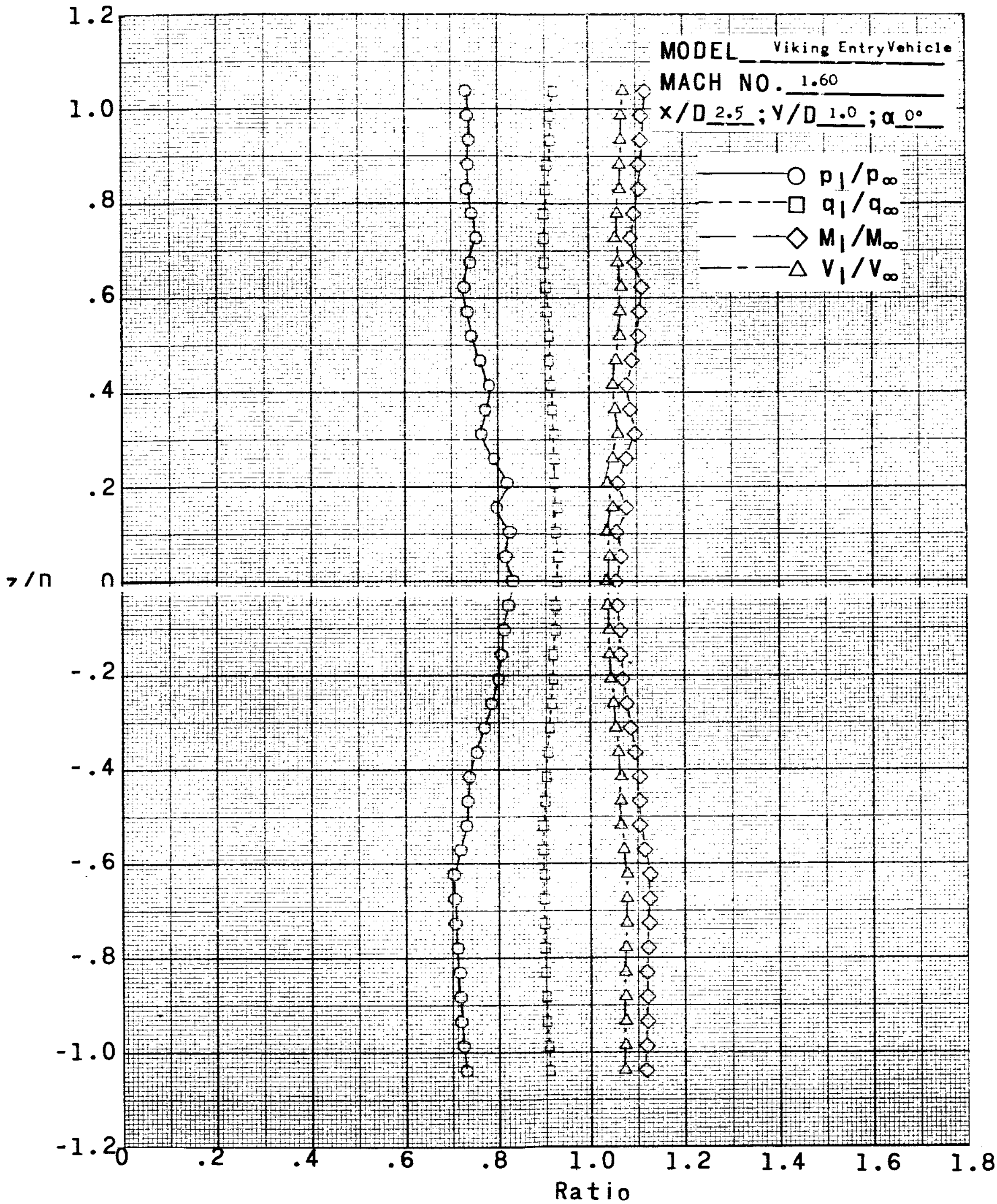
(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^0$.

Figure 5.- Continued.



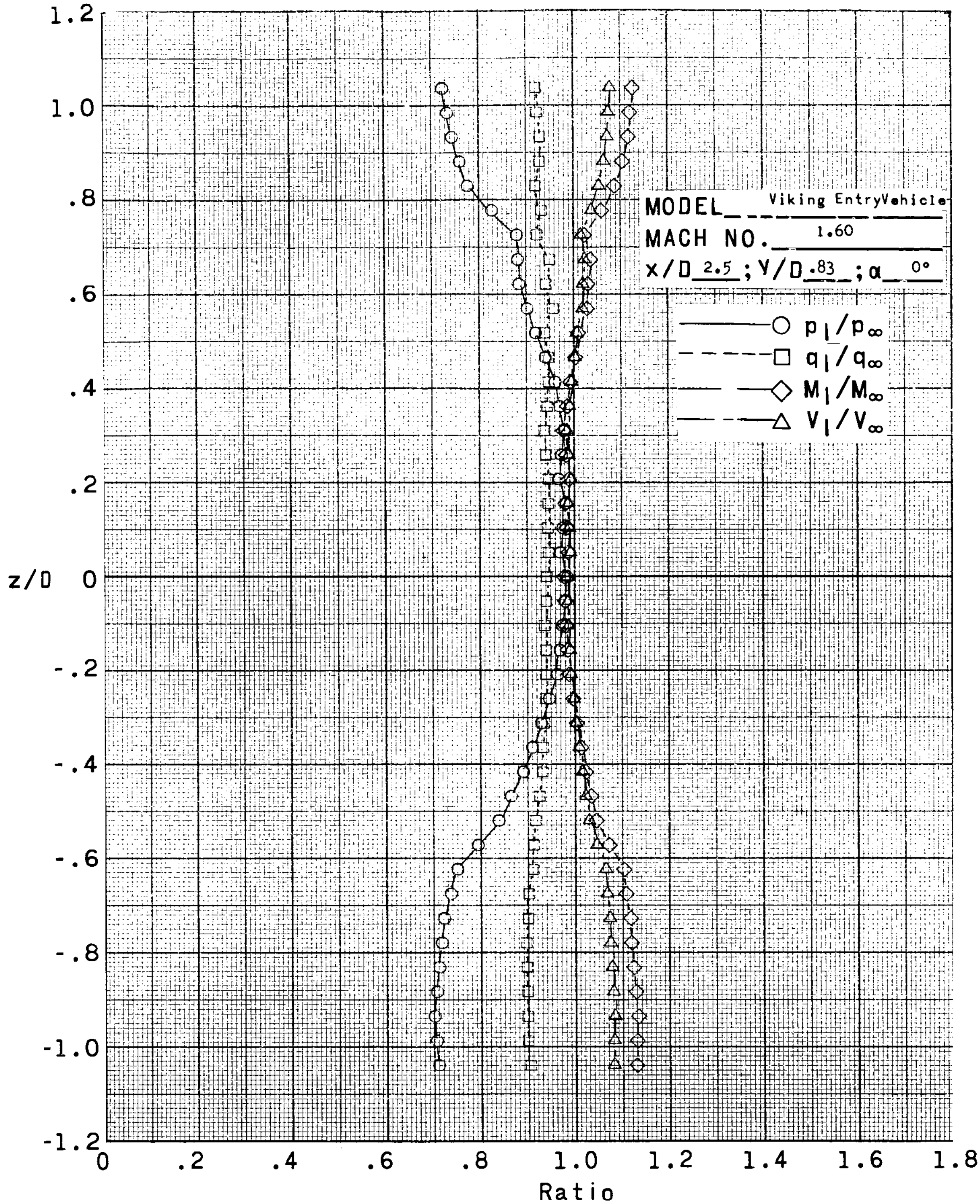
(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^{0}$.

Figure 5.- Continued.



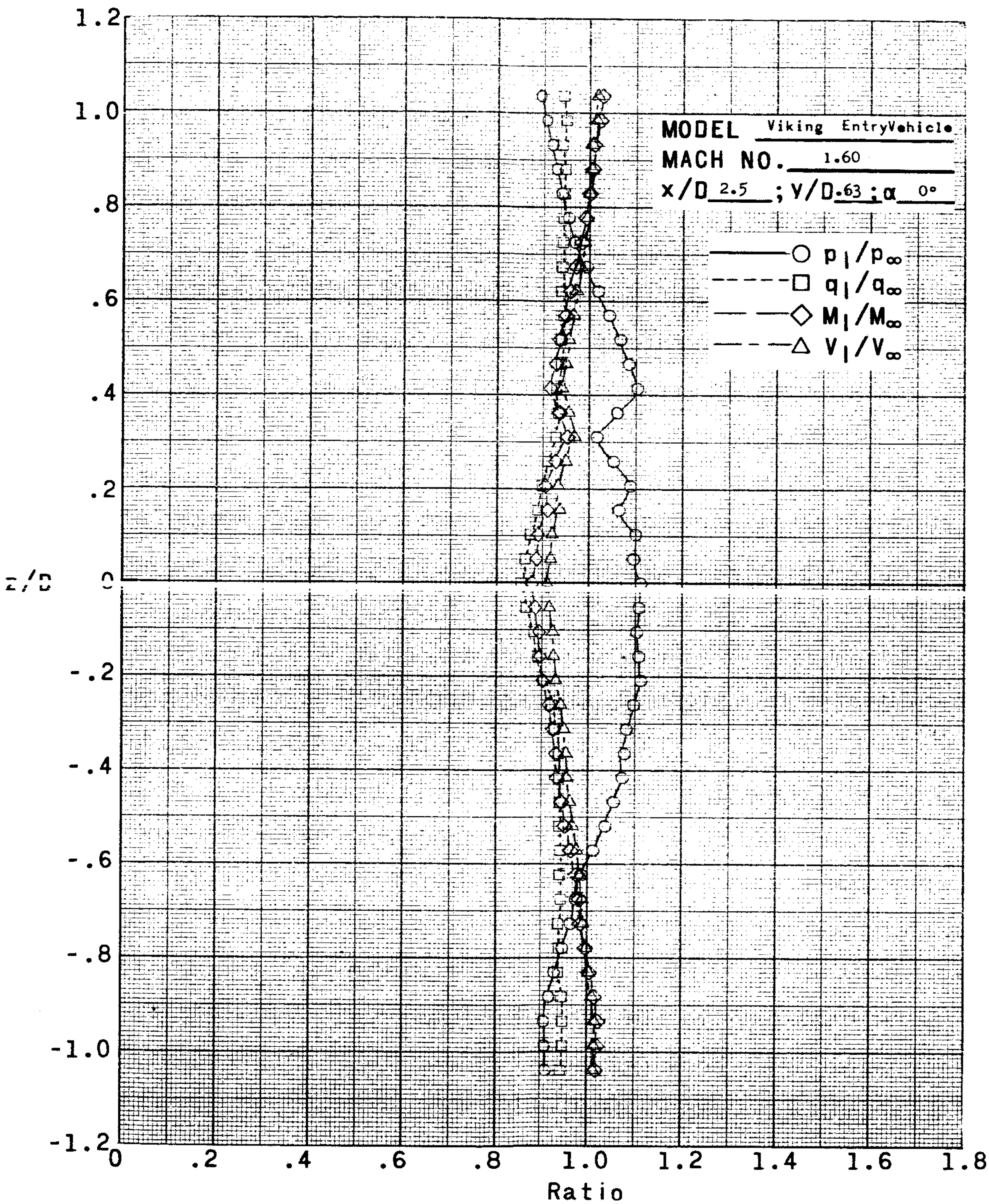
(g) $x/D = 2.5$; $y/D = 1.0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



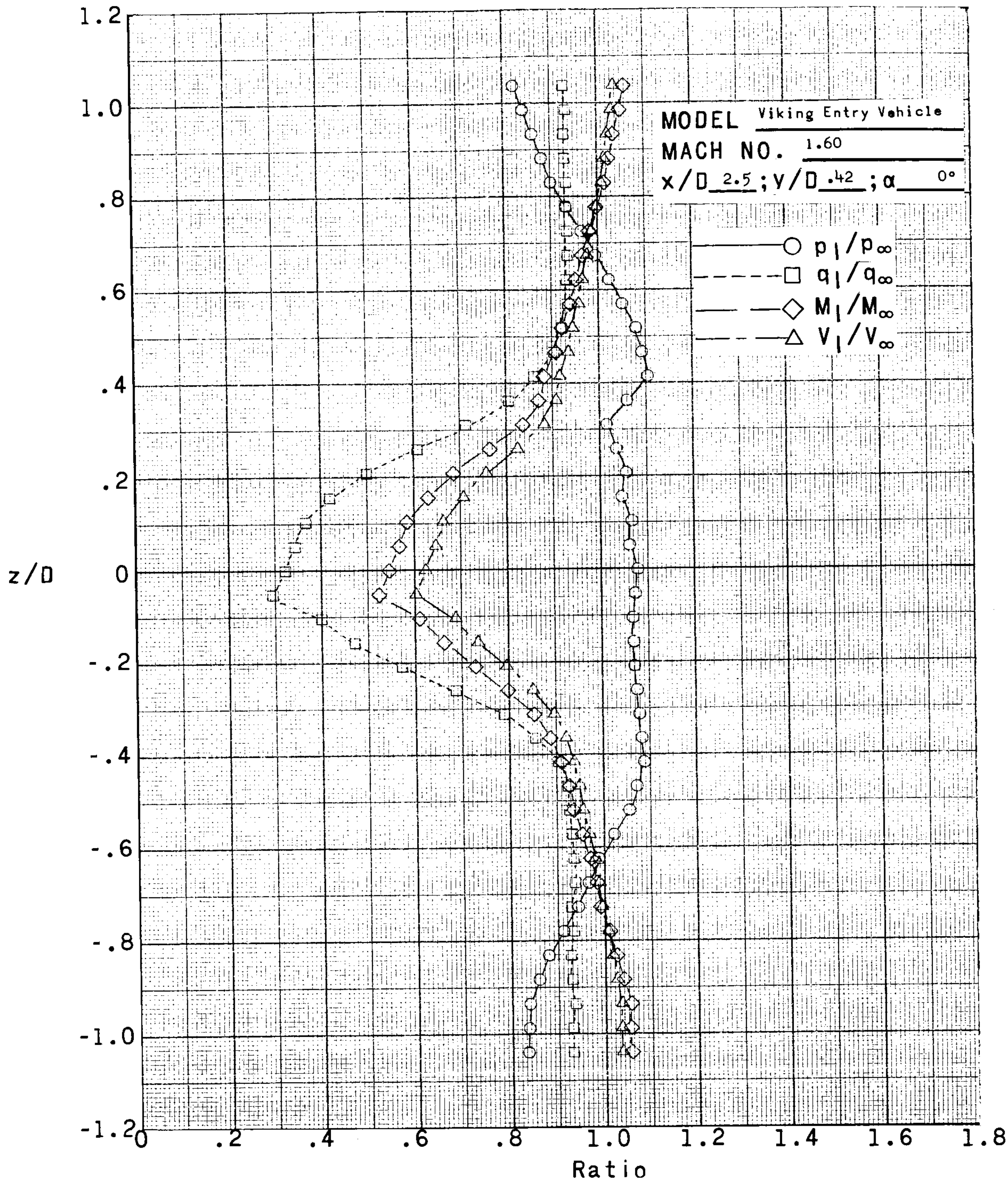
(h) $x/D = 2.5$; $y/D = 0.83$; $\alpha = 0^0$.

Figure 5.- Continued.



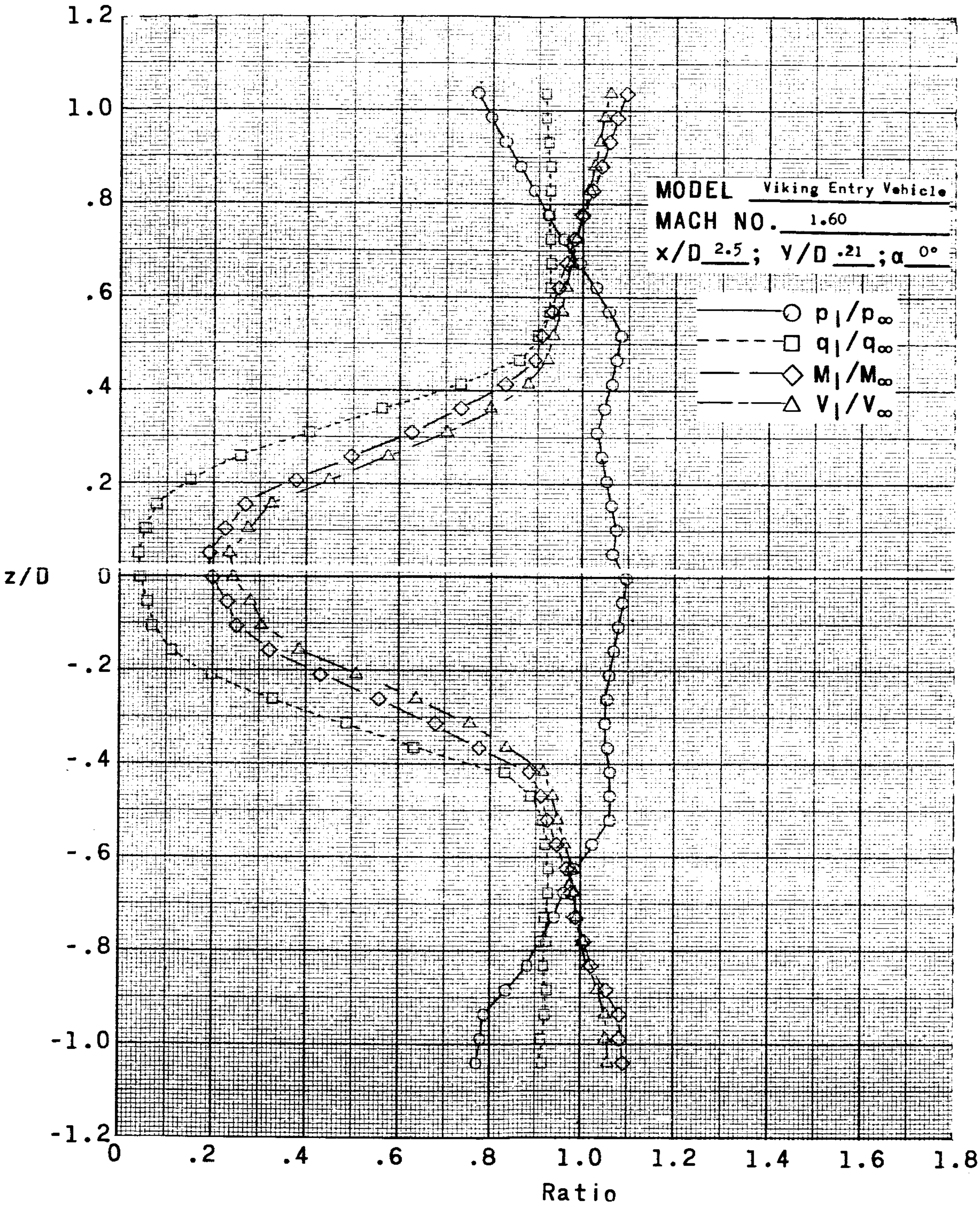
(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^{0}$.

Figure 5.- Continued.



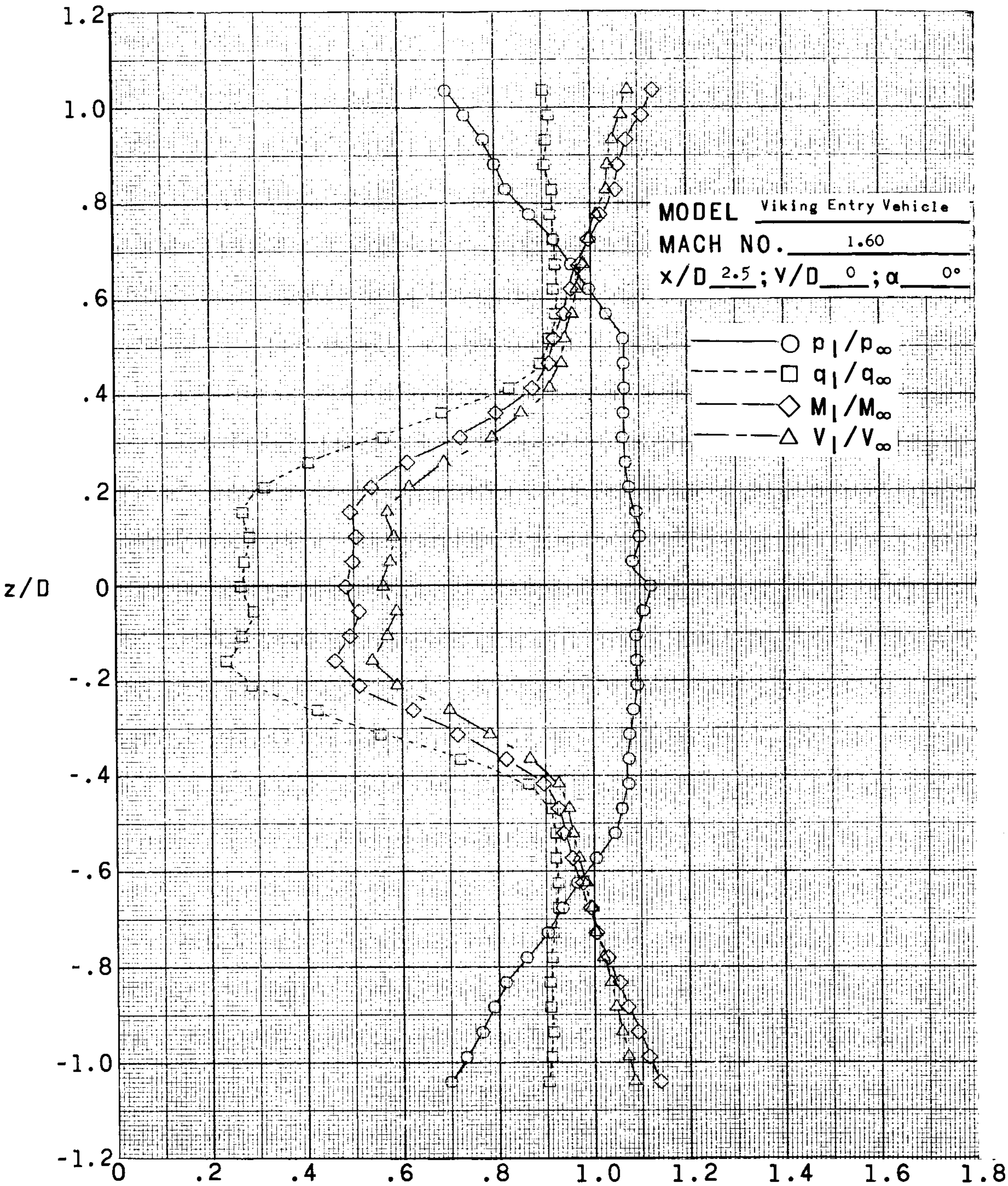
(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^o$.

Figure 5.- Continued.



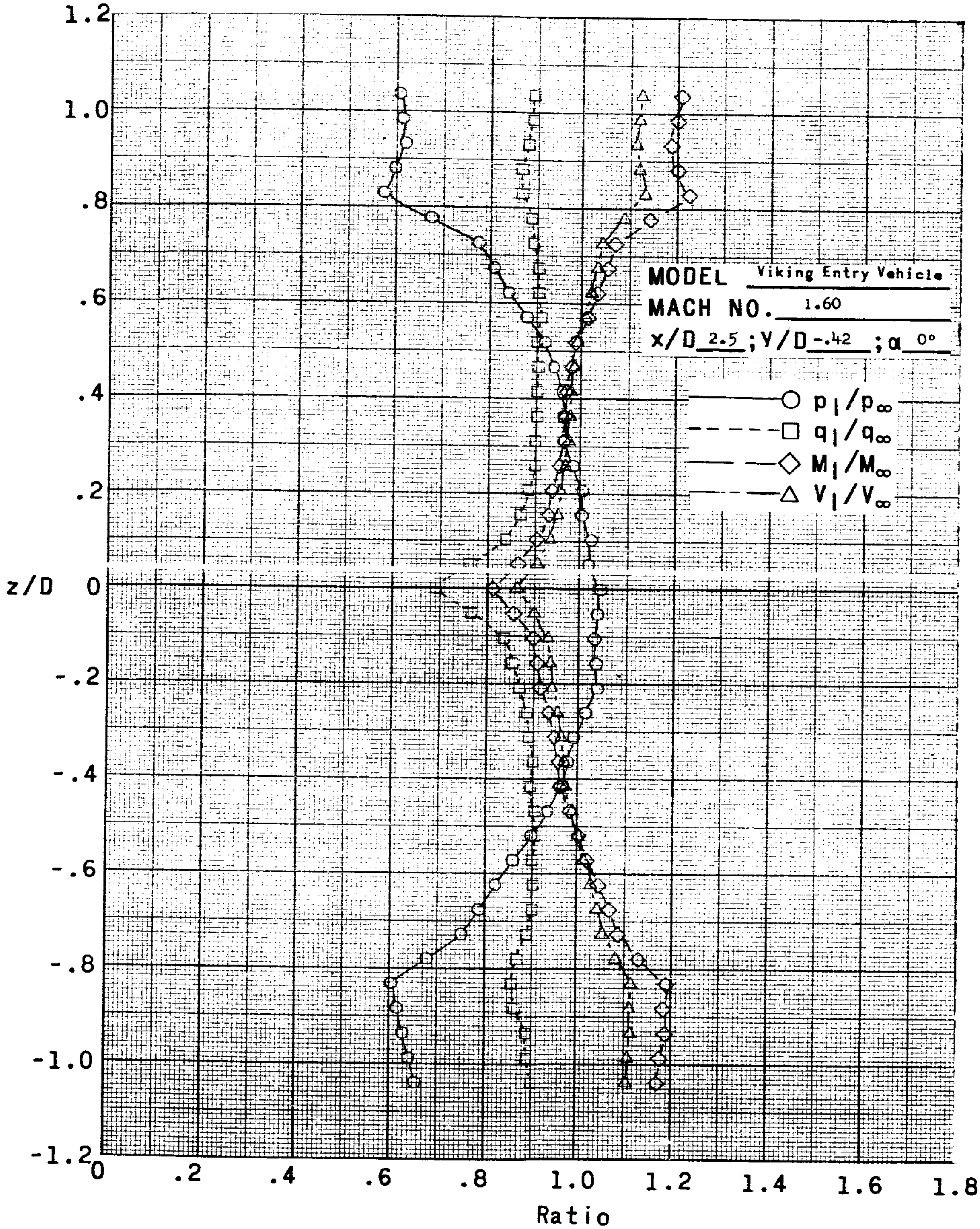
(k) x/D = 2.5; y/D = 0.21; α = 0°.

Figure 5.- Continued.



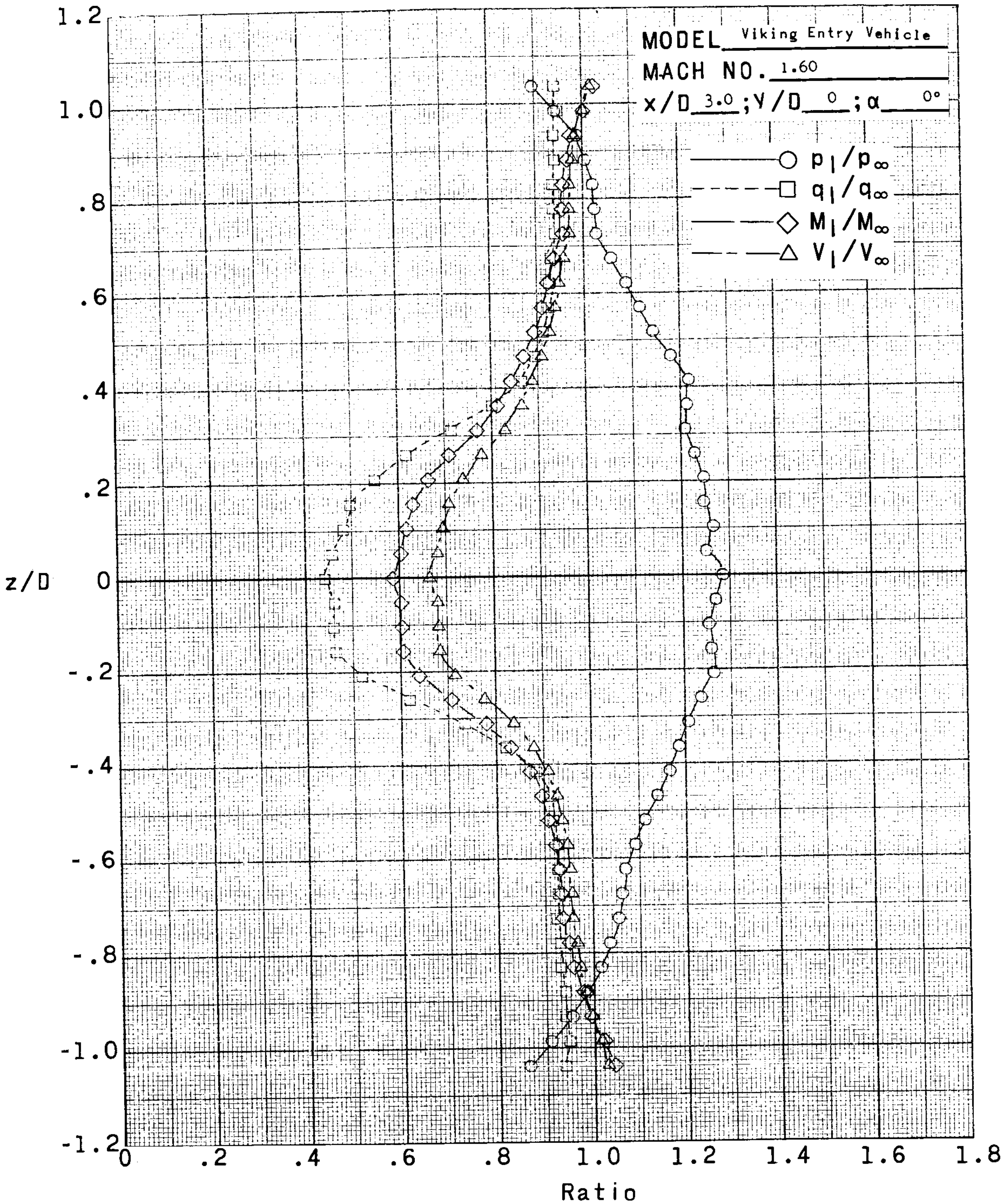
(l) x/D = 2.5; y/D = 0; α = 0°.

Figure 5.- Continued.



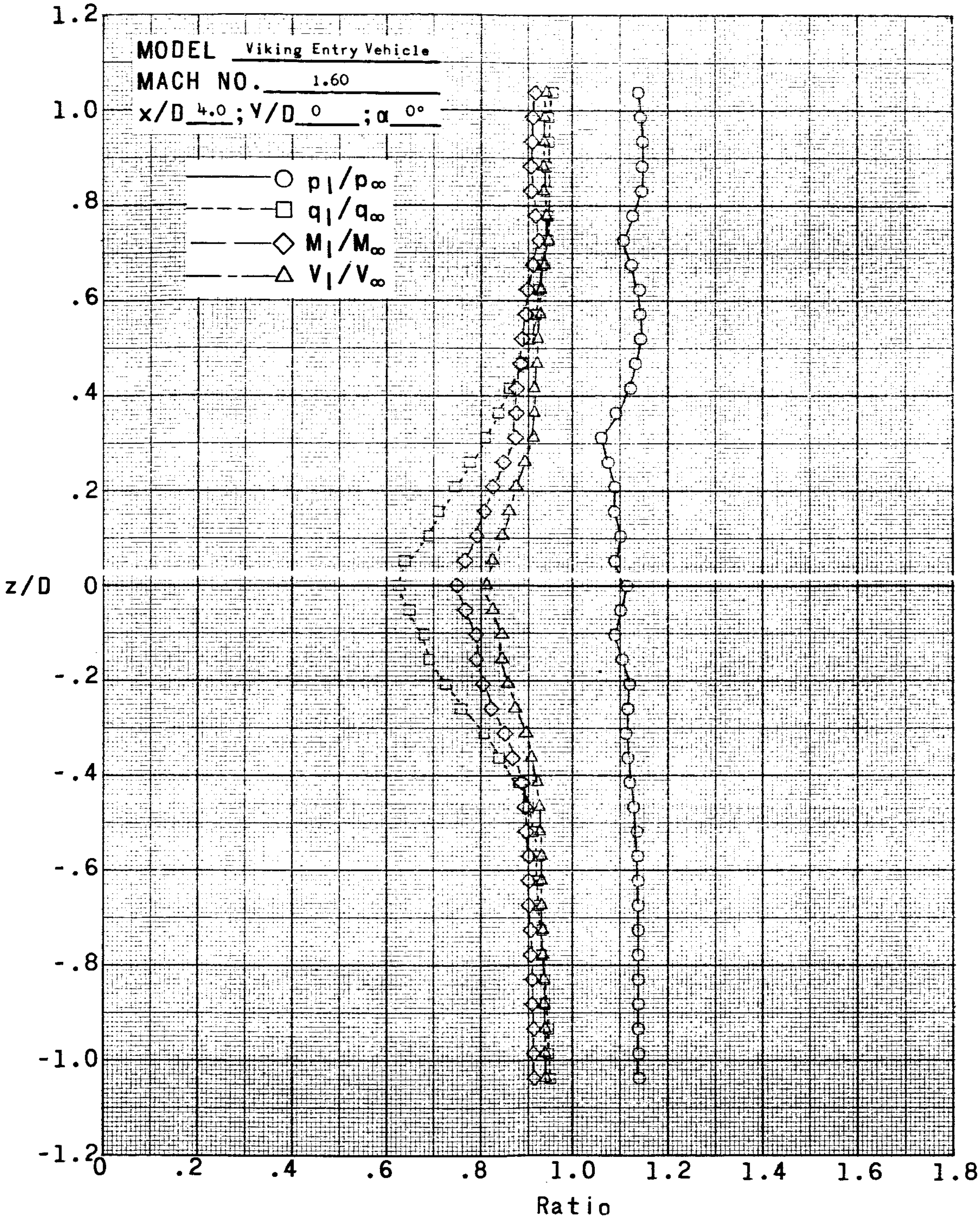
(m) $x/D = 2.5$; $y/D = -0.42$; $\alpha = 0^o$.

Figure 5.- Continued.



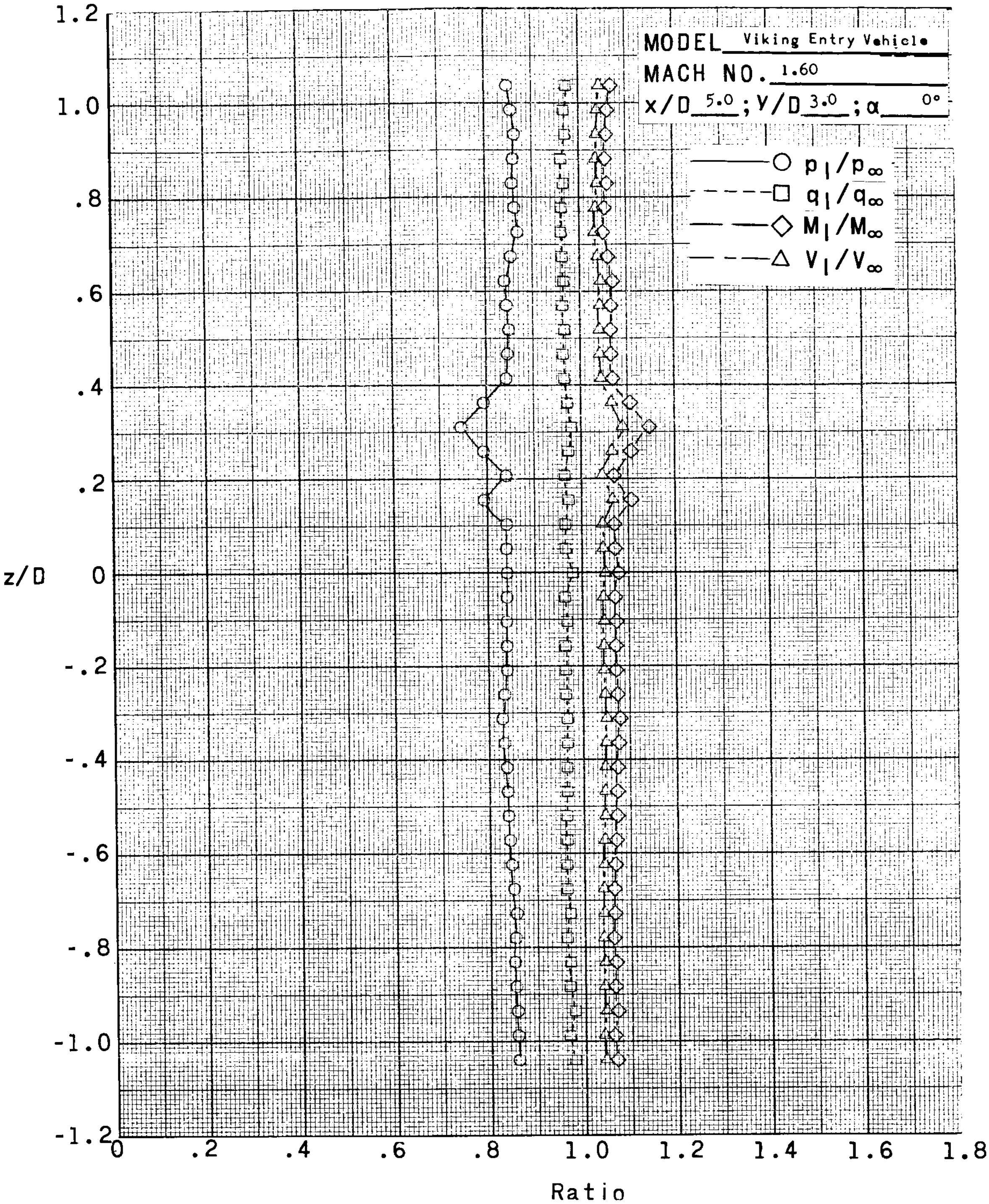
(n) x/D = 3.0; y/D = 0; α = 0°.

Figure 5.- Continued.



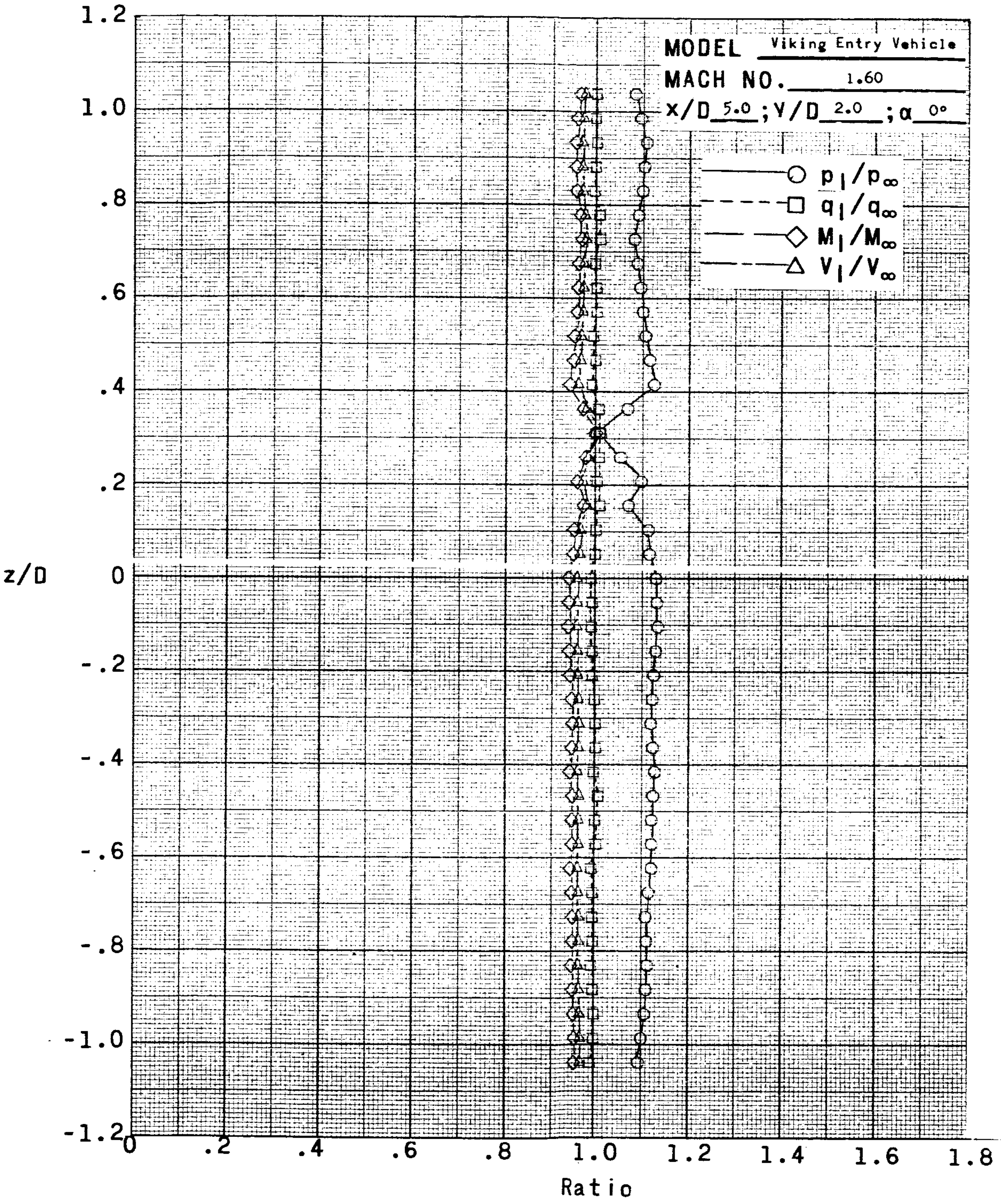
(o) x/D = 4.0; y/D = 0; α = 0°.

Figure 5.- Continued.



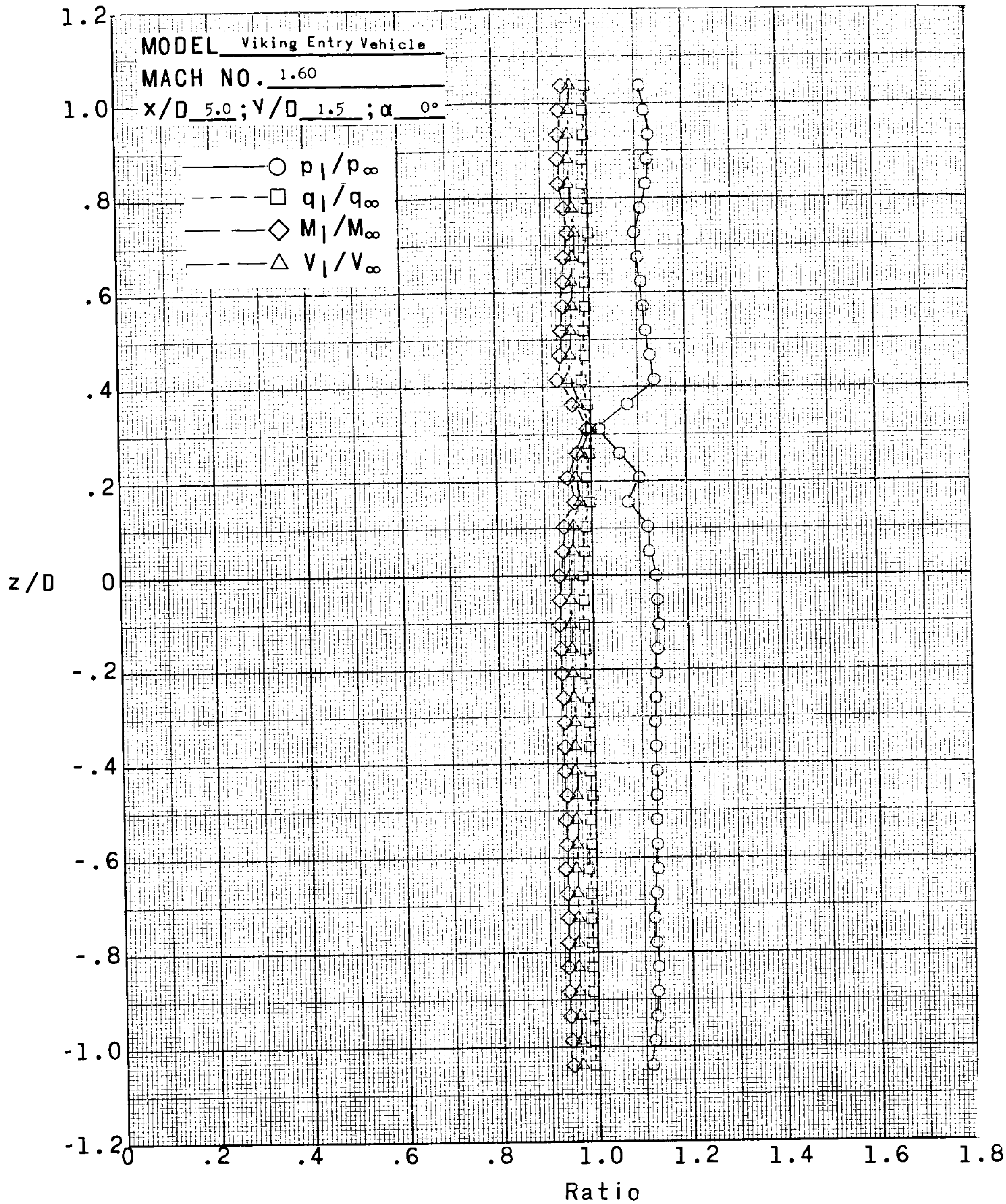
(p) $x/D = 5.0$; $y/D = 3.0$; $\alpha = 0^{\circ}$.

Figure 5.- Continued.



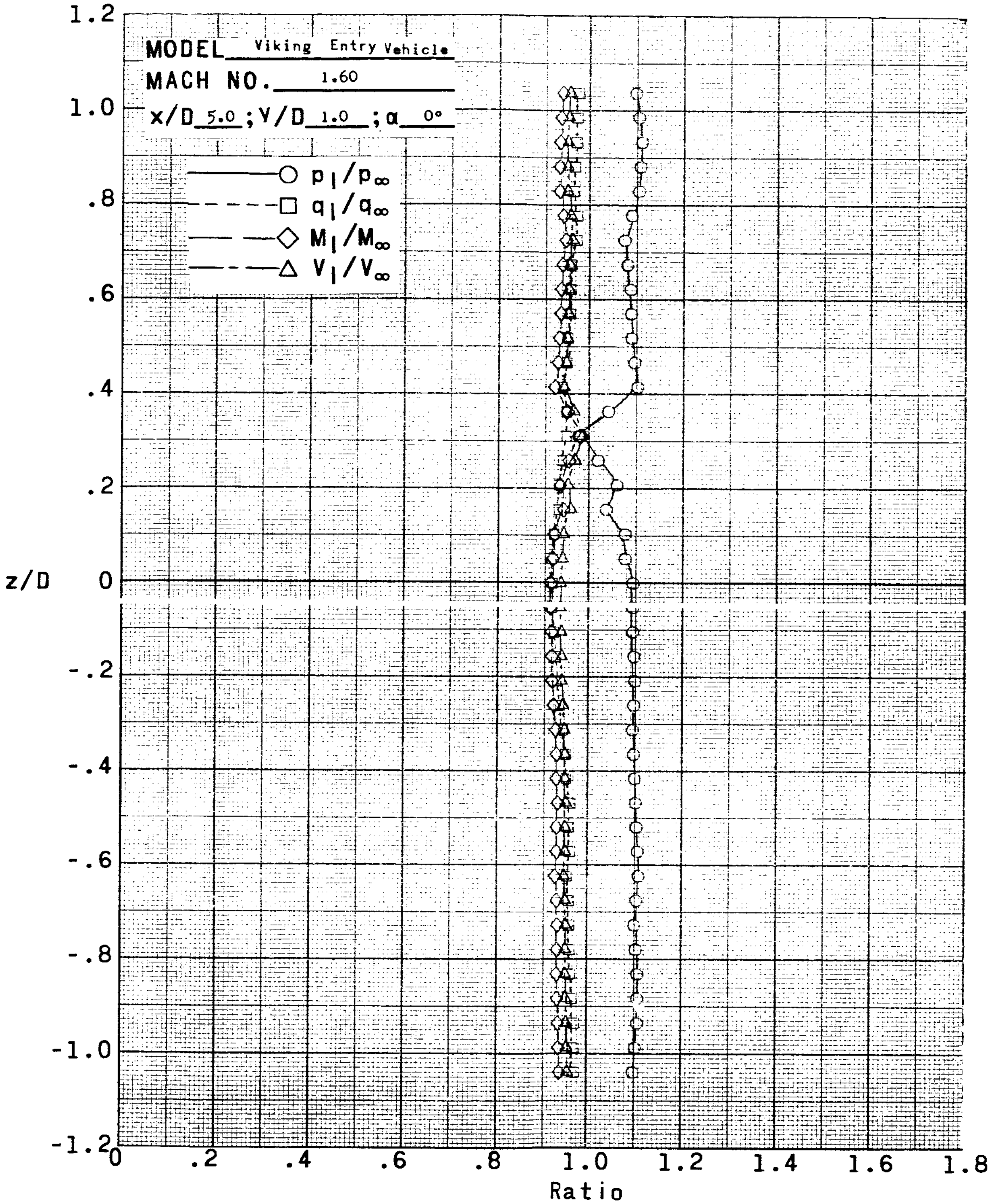
(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



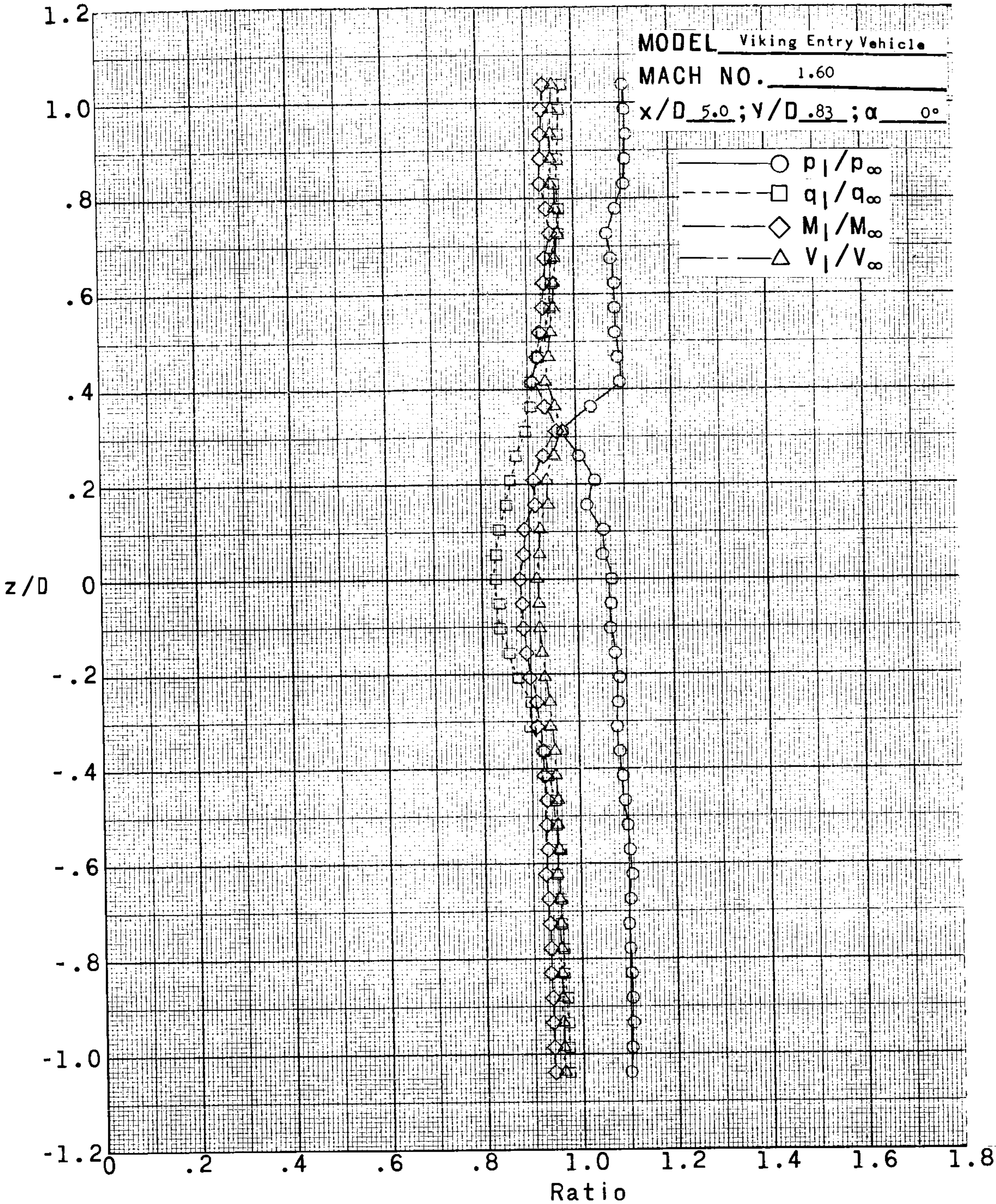
(r) x/D = 5.0; y/D = 1.5; α = 0°.

Figure 5.- Continued.



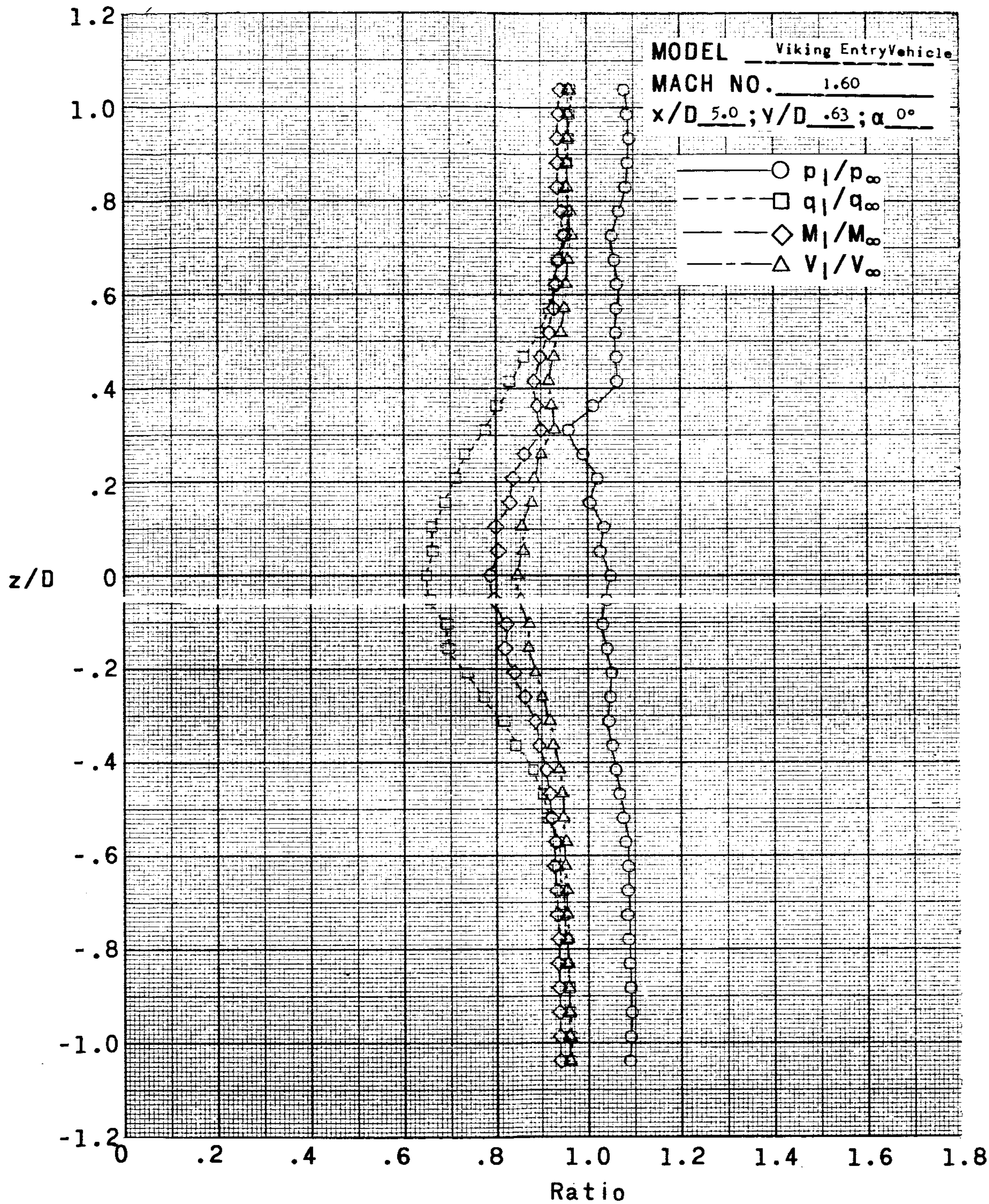
(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^{\circ}$.

Figure 5.- Continued.



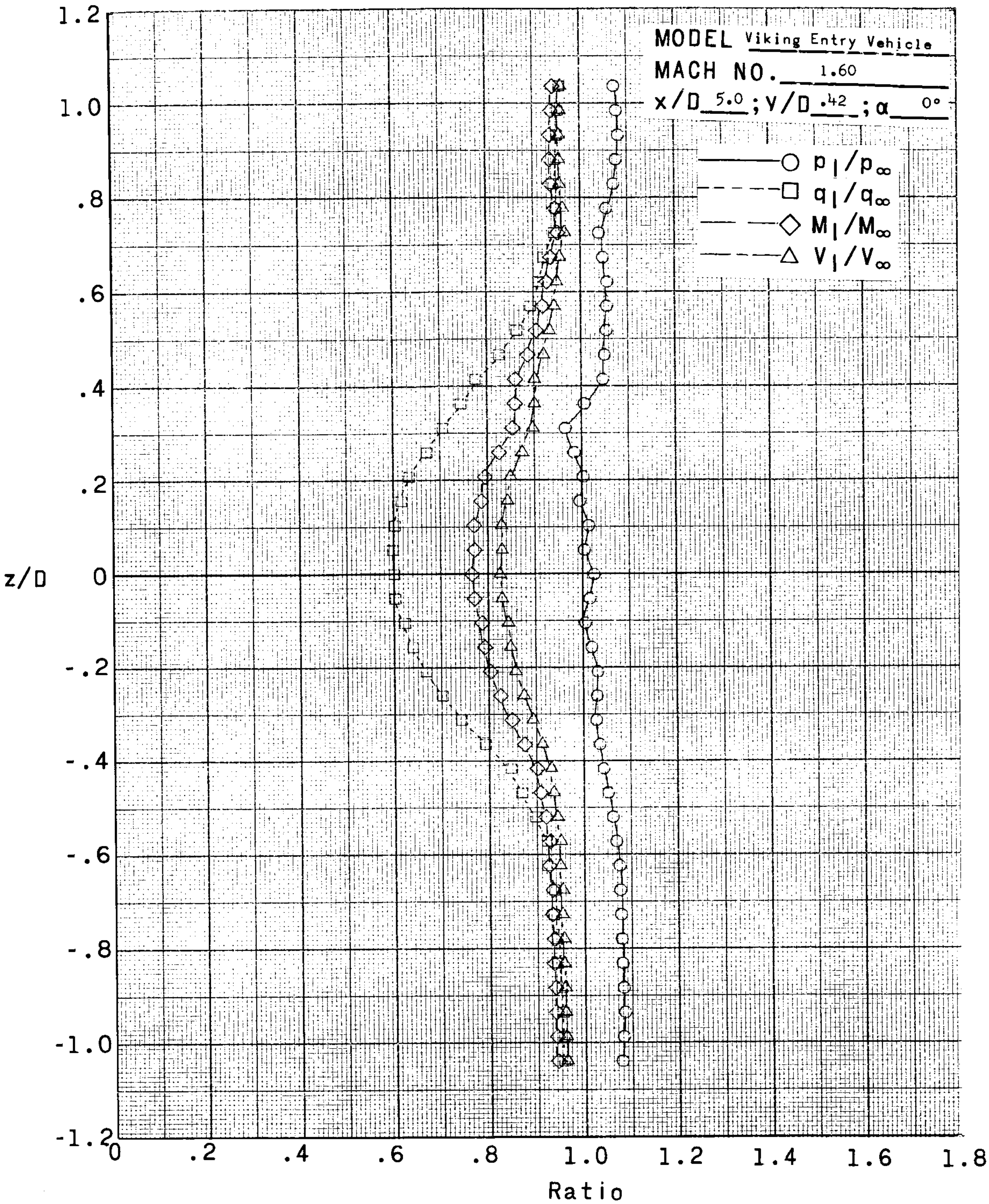
(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^0$.

Figure 5.- Continued.



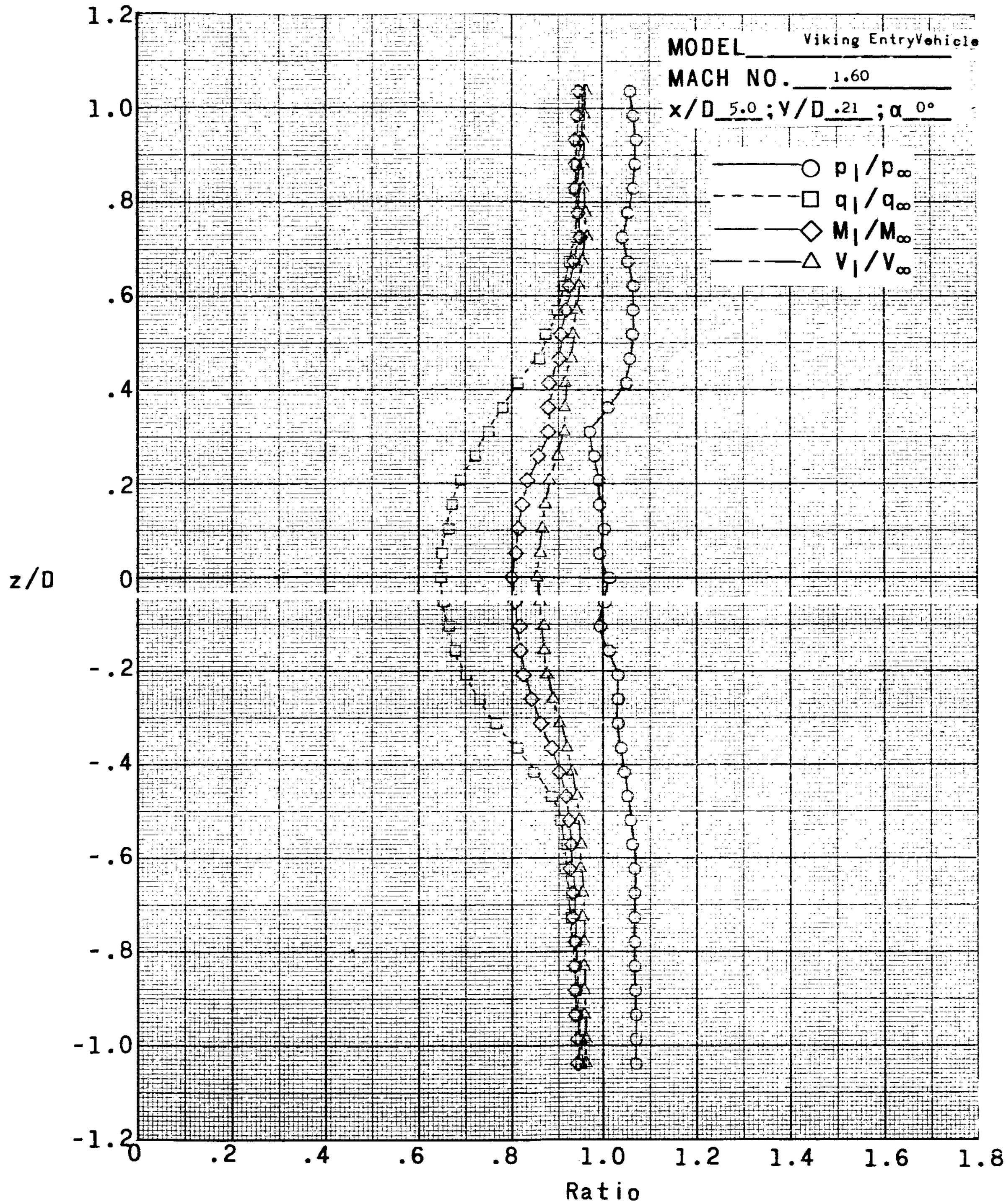
(u) x/D = 5.0; y/D = 0.63; α = 0°.

Figure 5.- Continued.



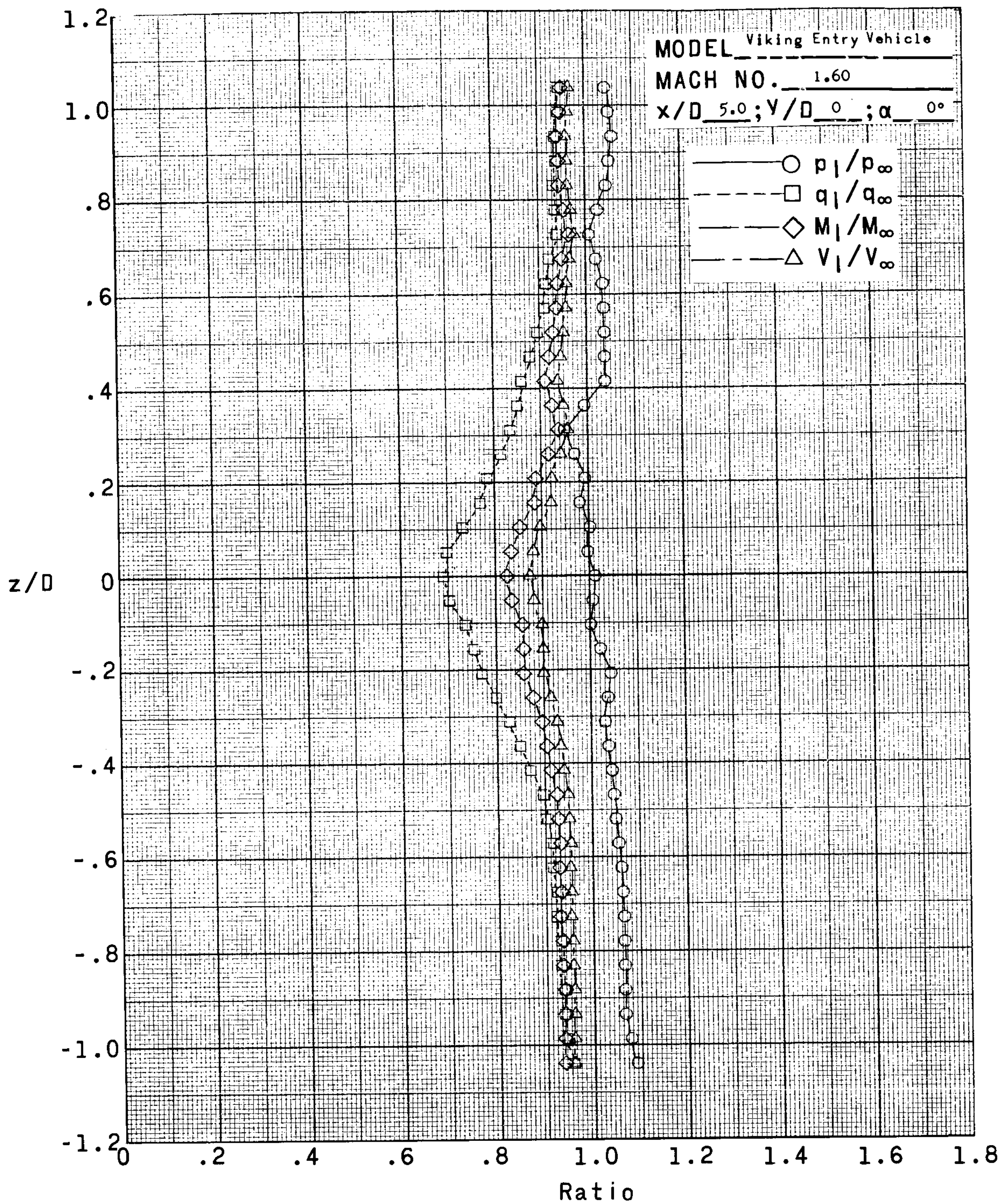
(v) x/D = 5.0; y/D = 0.42; α = 0°.

Figure 5.- Continued.



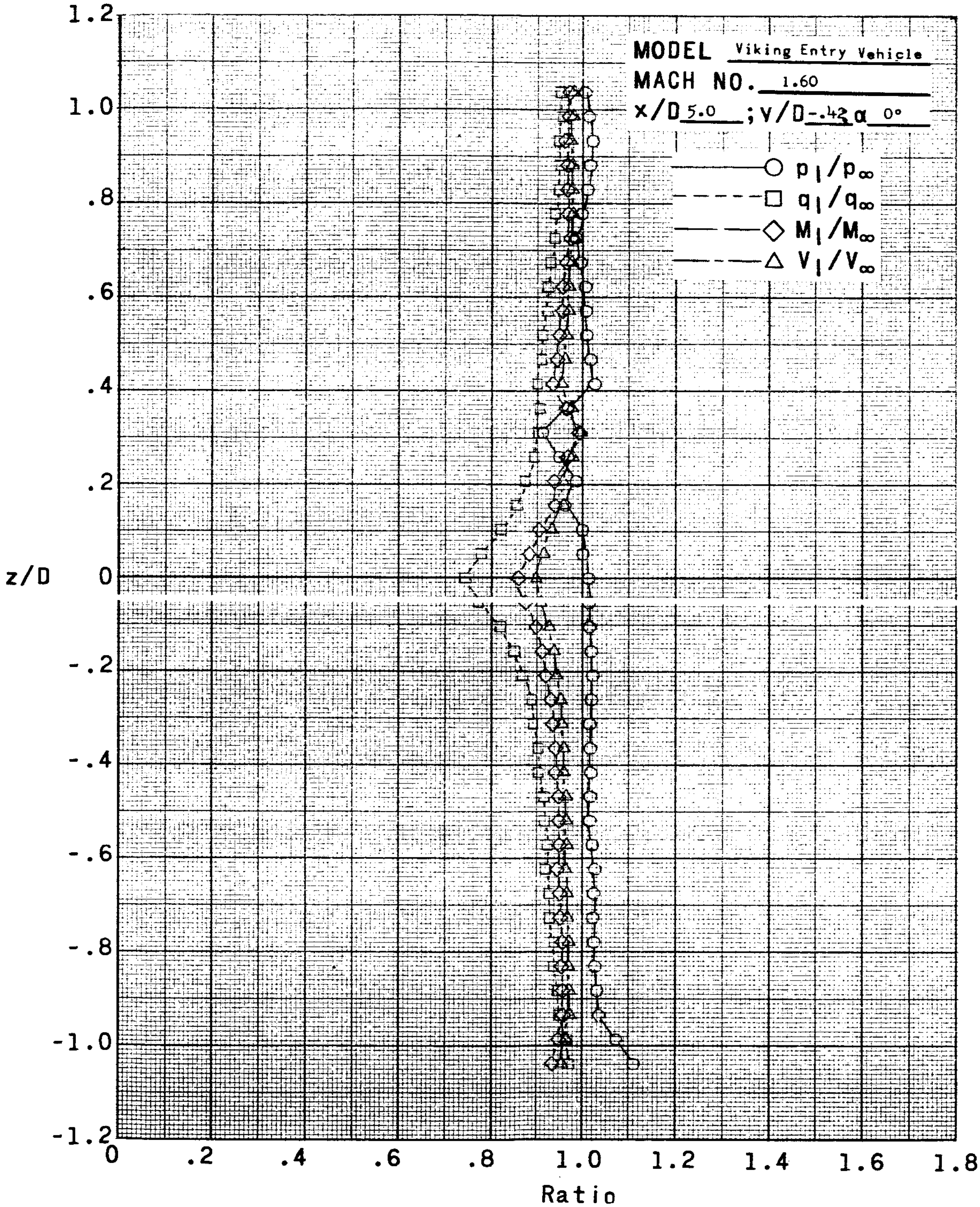
(w) x/D = 5.0; y/D = 0.21; α = 0°.

Figure 5.- Continued.



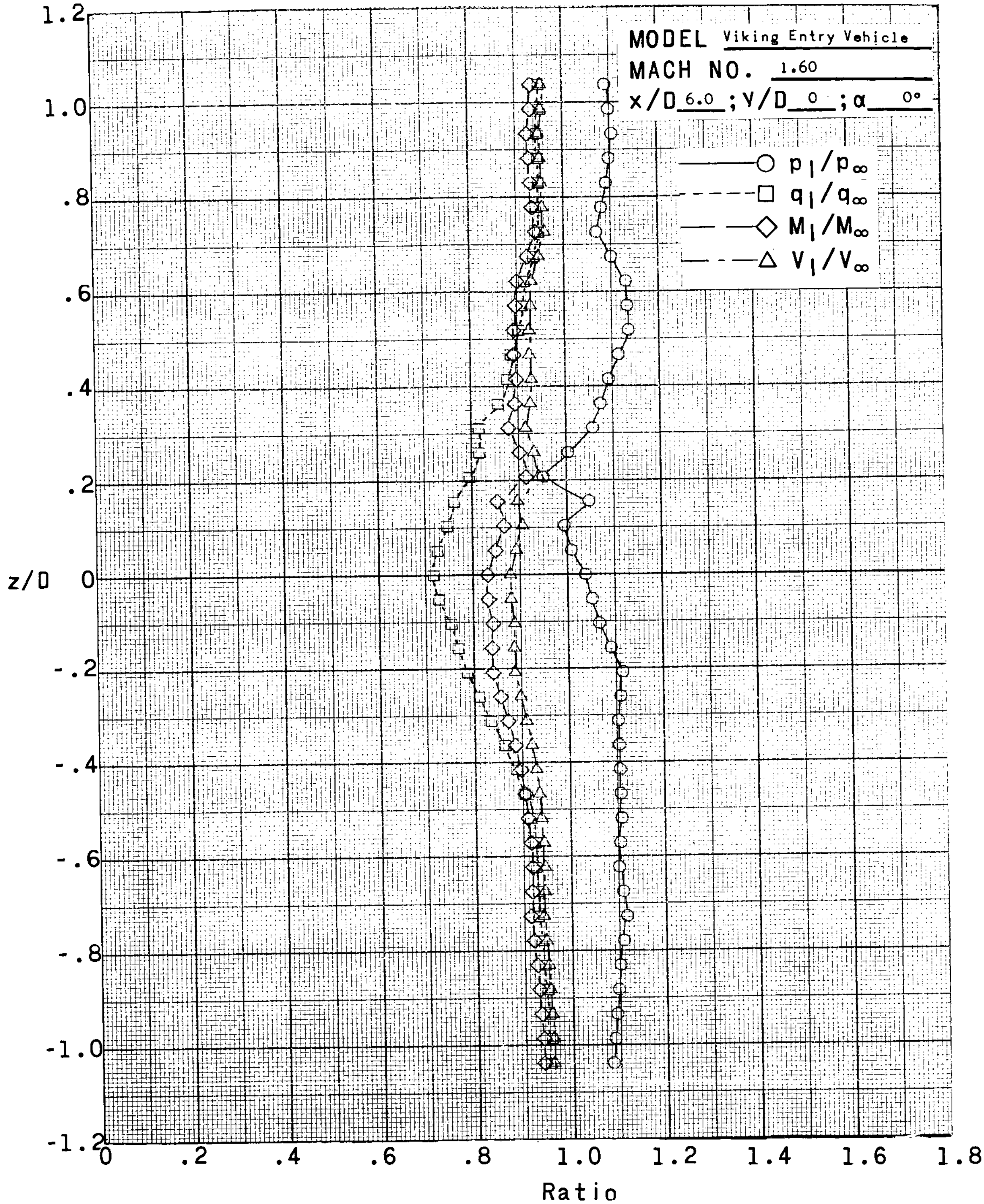
(x) $x/D = 5.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 5.- Continued.



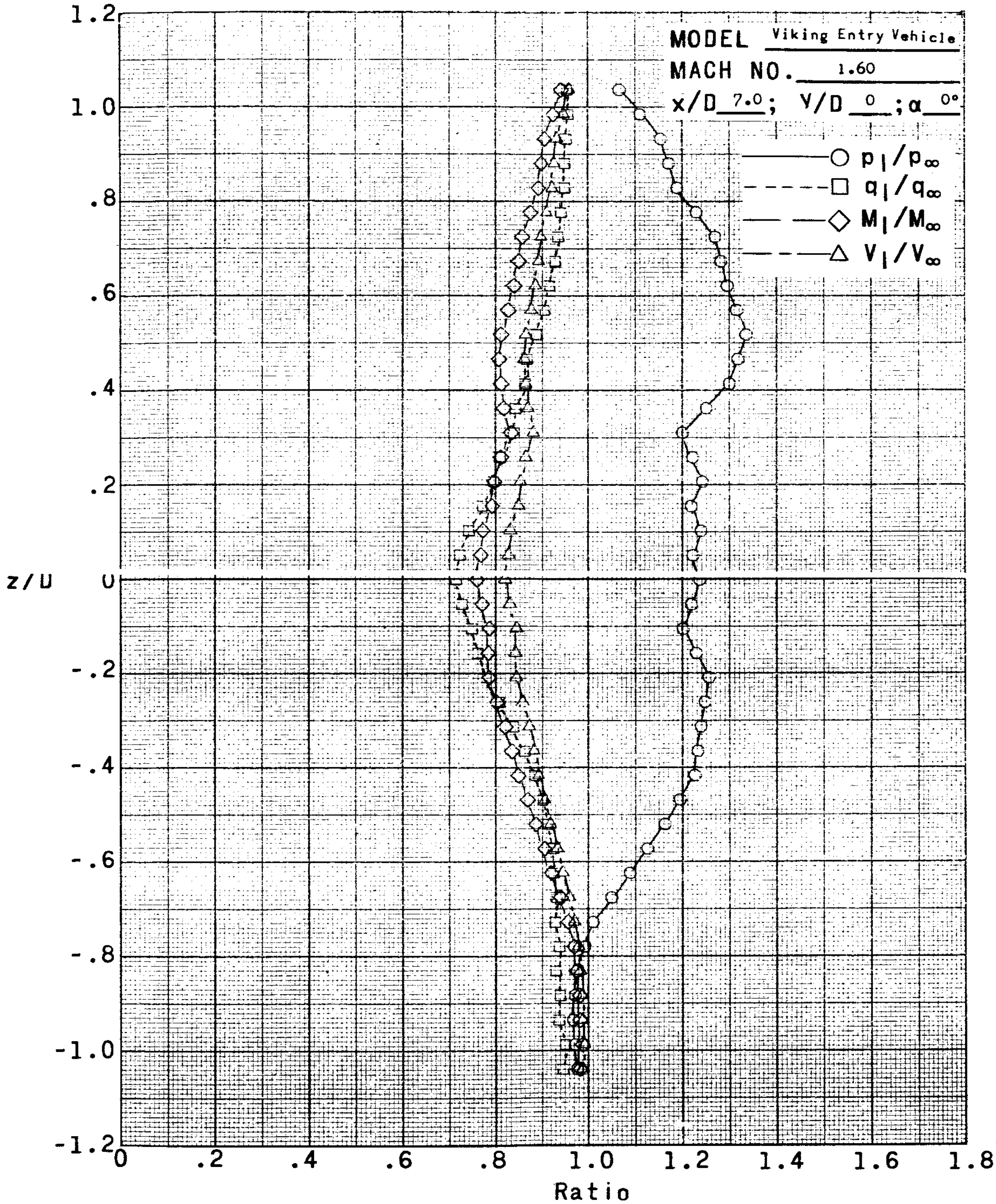
(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^{\circ}$.

Figure 5.- Continued.



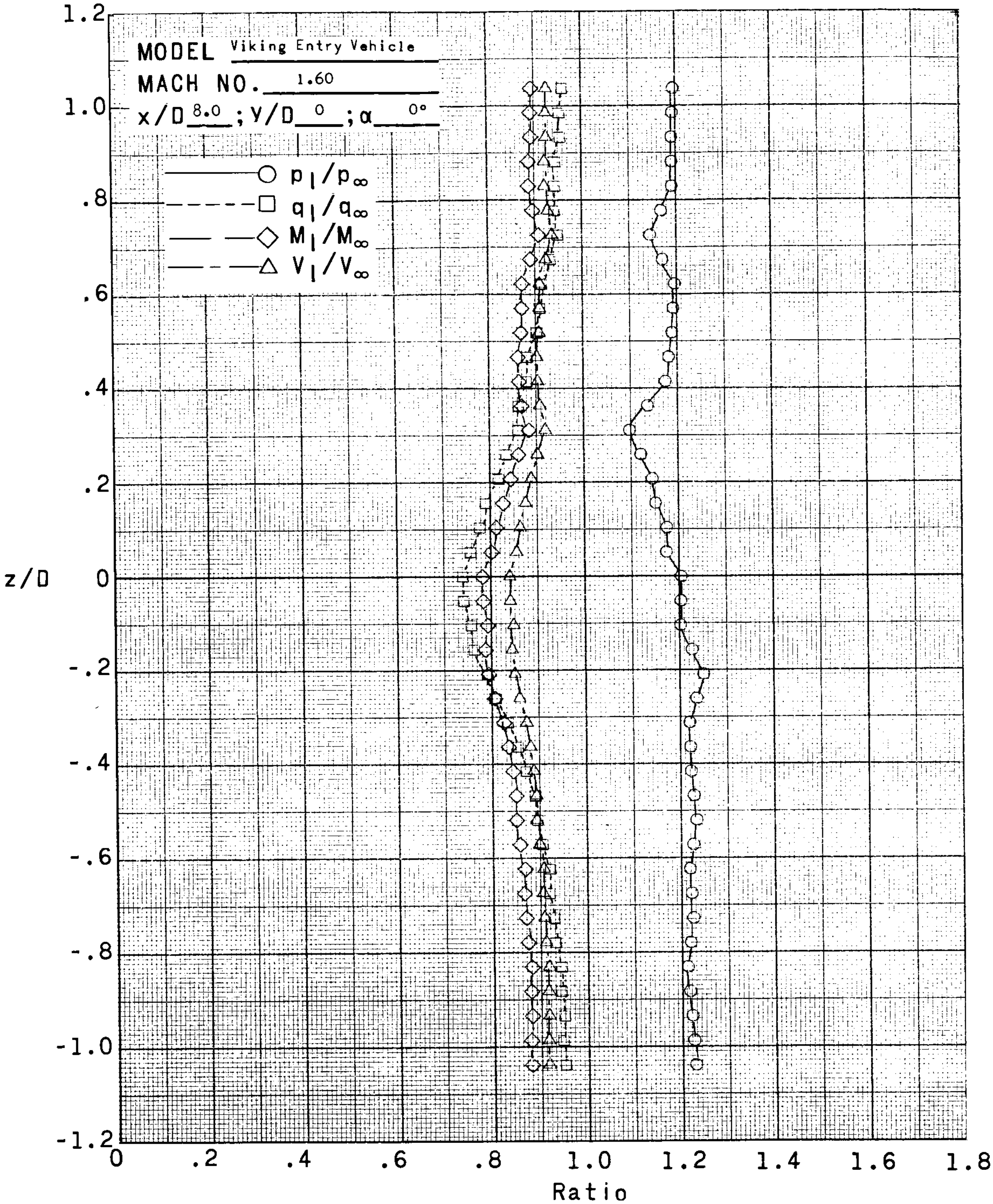
(z) $x/D = 6.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 5.- Continued.



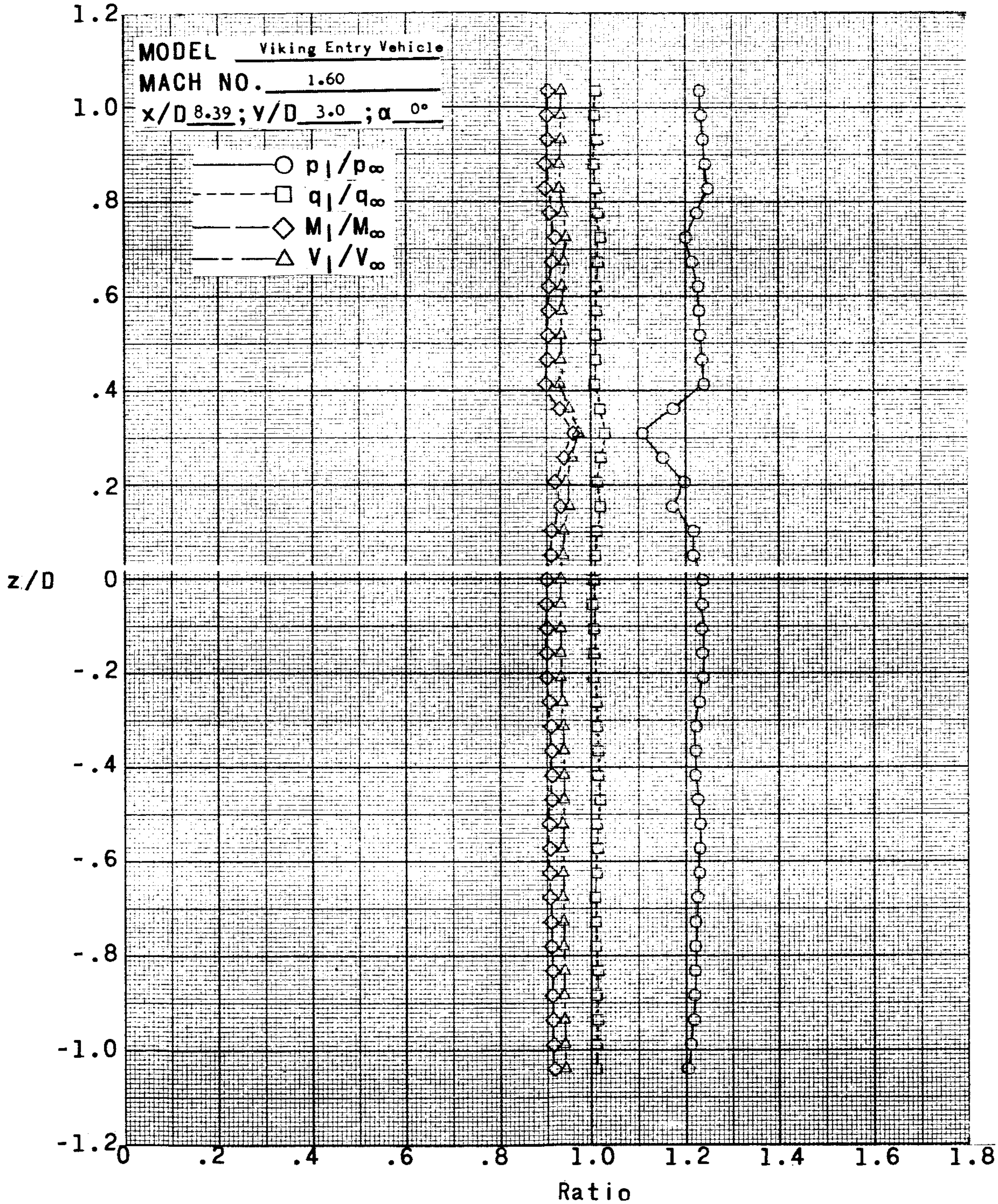
(aa) x/D = 7.0; y/D = 0; α = 0°.

Figure 5.- Continued.



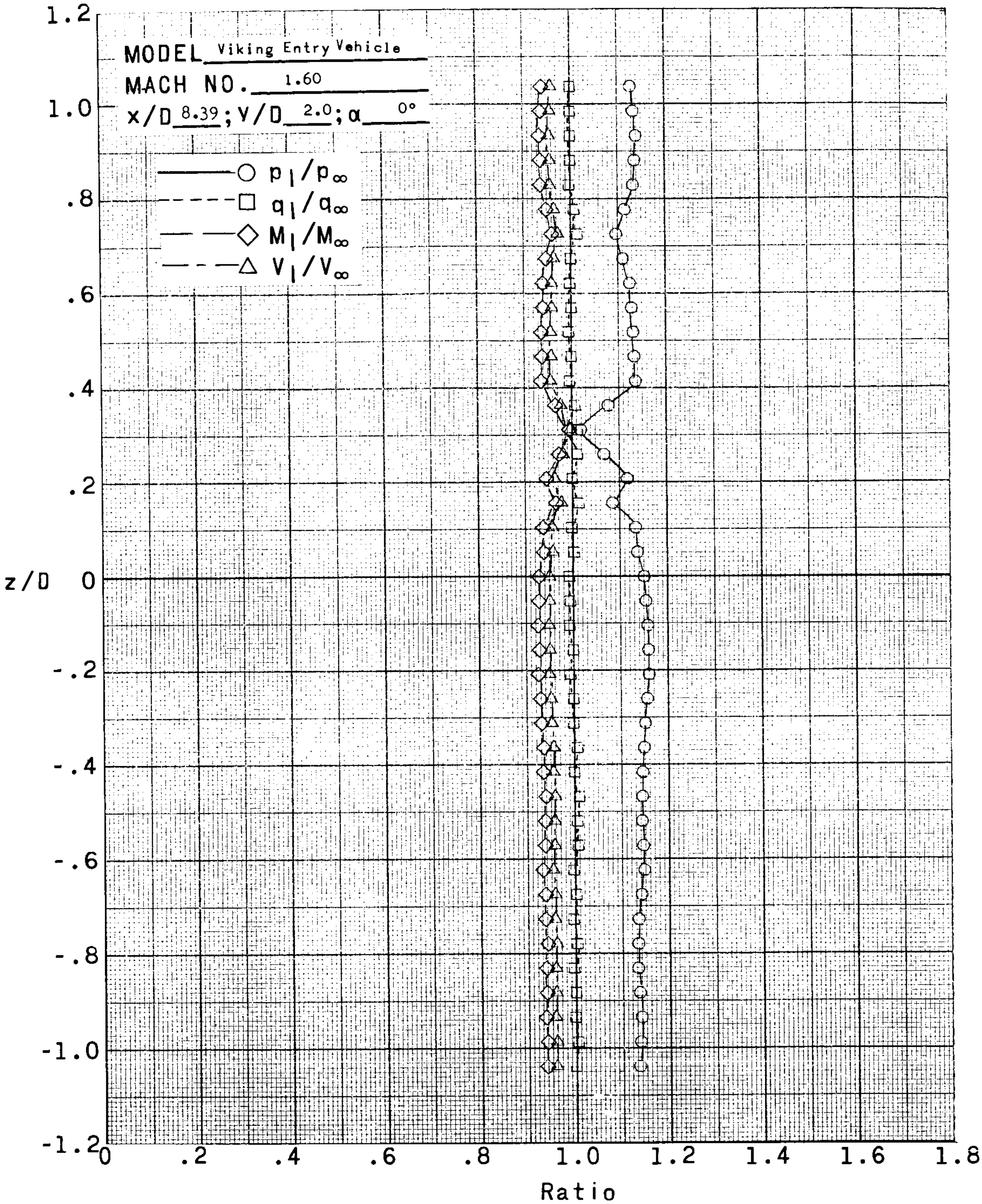
(bb) x/D = 8.0; y/D = 0; α = 0°.

Figure 5.- Continued.



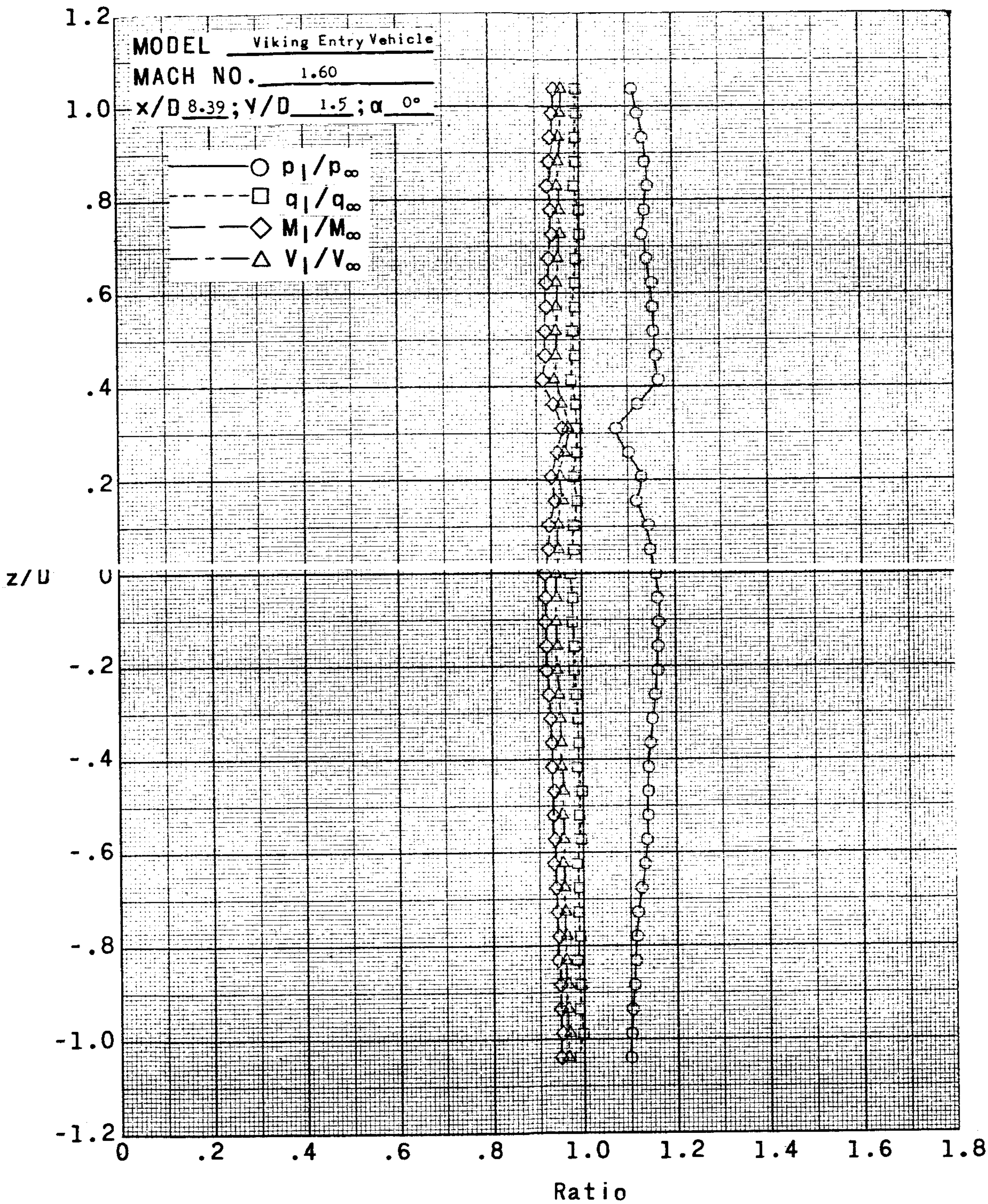
(cc) $x/D = 8.39$; $y/D = 3.0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



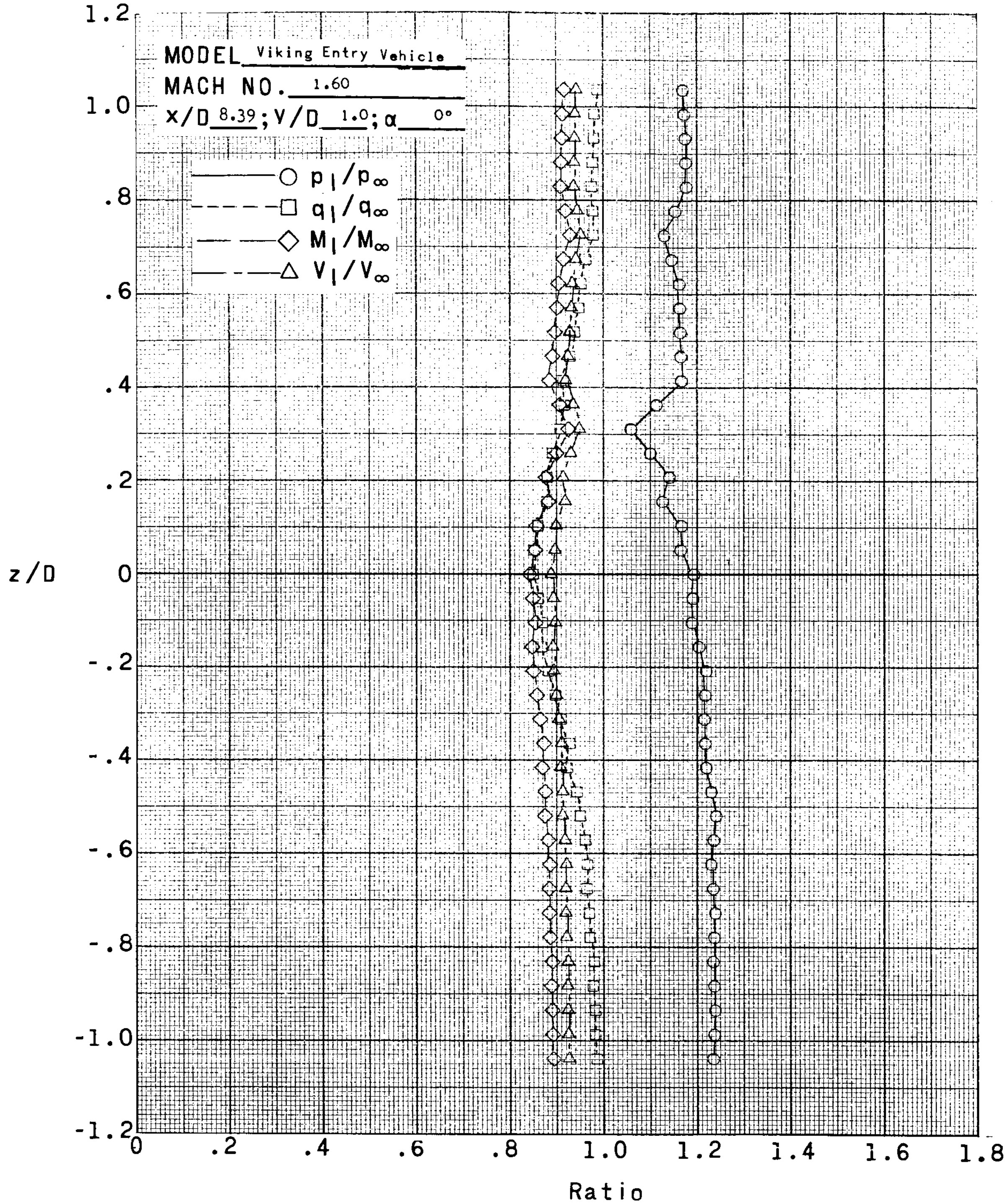
(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



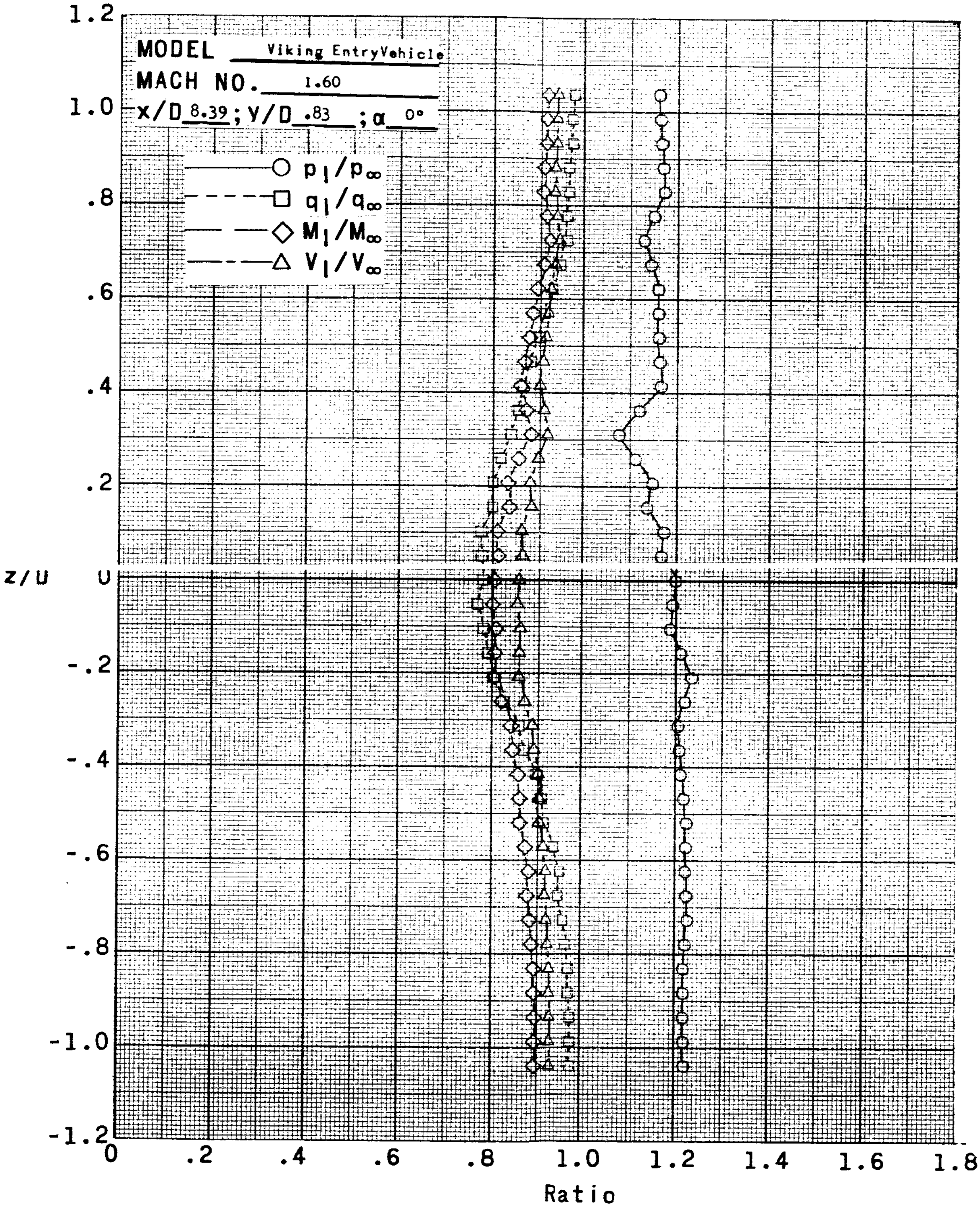
(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^0$.

Figure 5.- Continued.



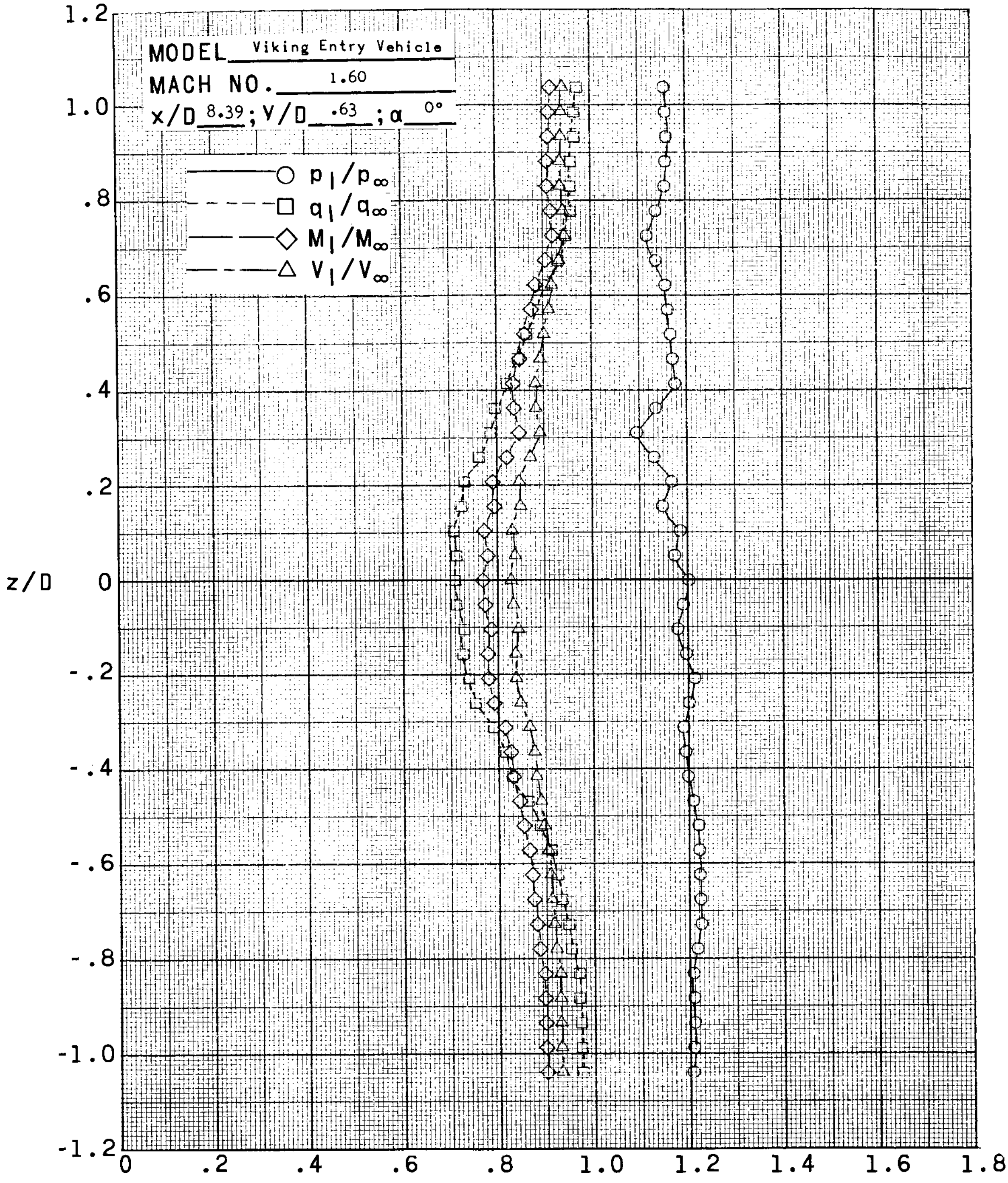
(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^{0}$.

Figure 5.- Continued.



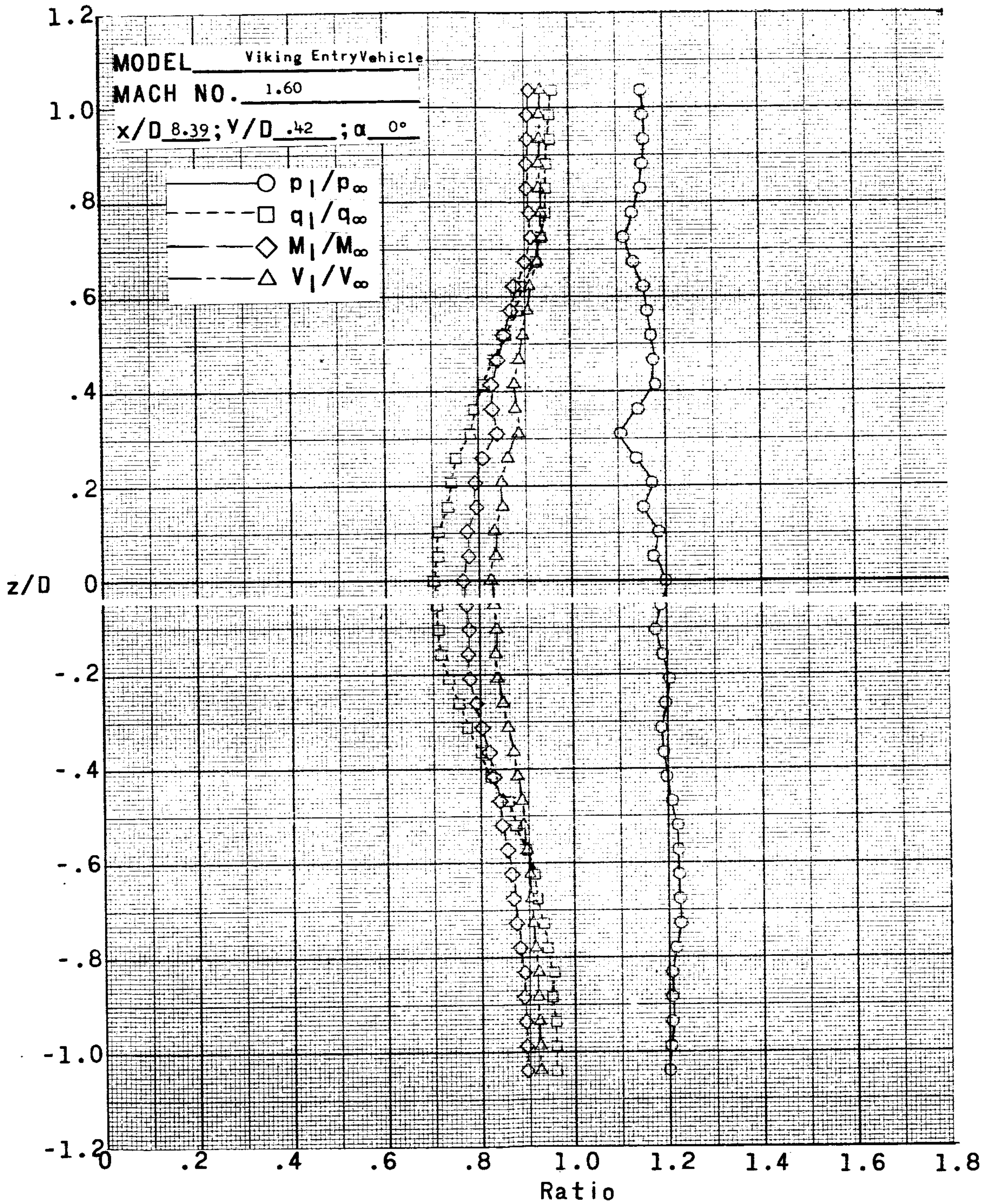
(gg) x/D = 8.39; y/D = 0.83; α = 0°.

Figure 5.- Continued.



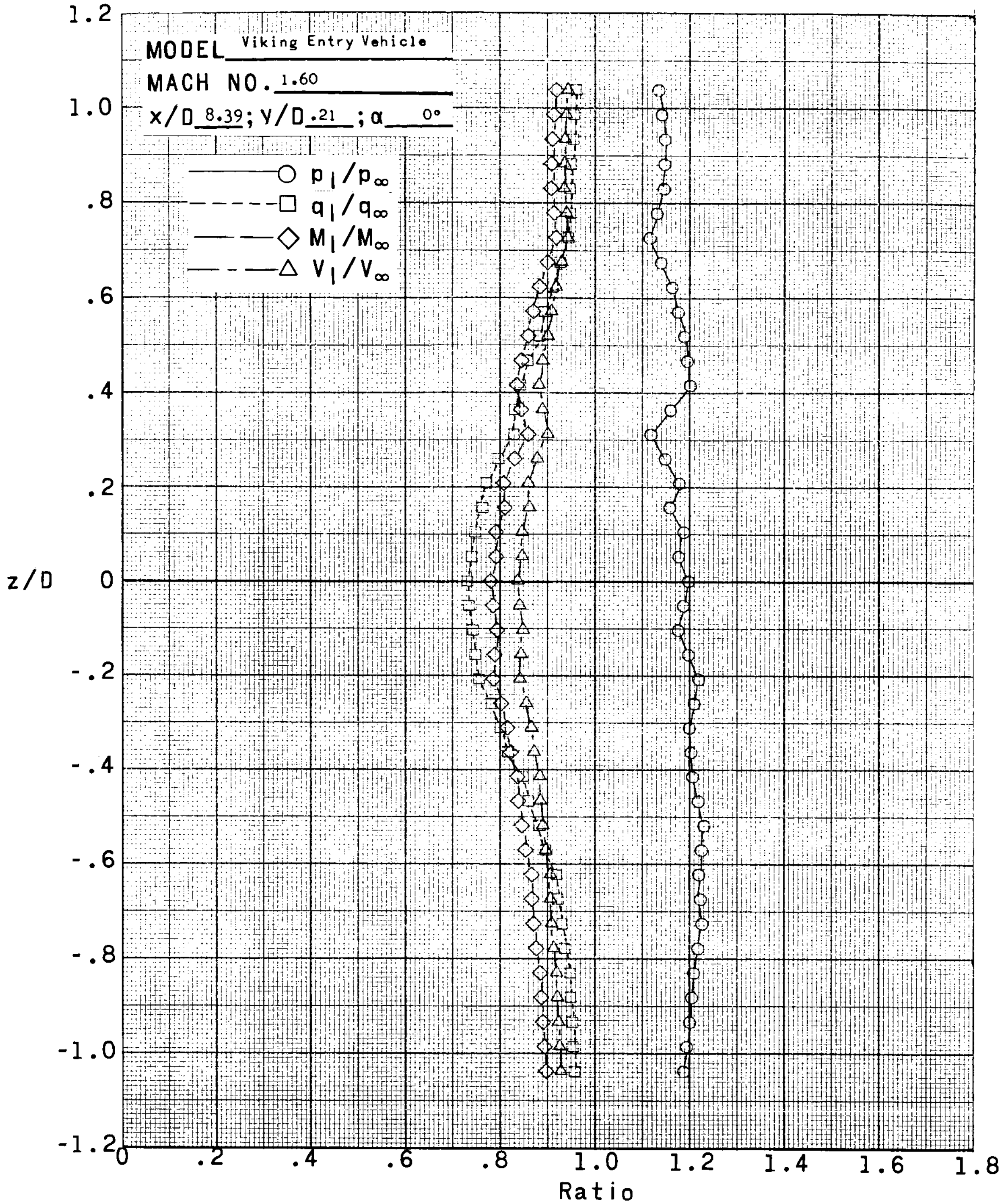
(hh) x/D = 8.39; y/D = 0.63; α = 0°.

Figure 5.- Continued.



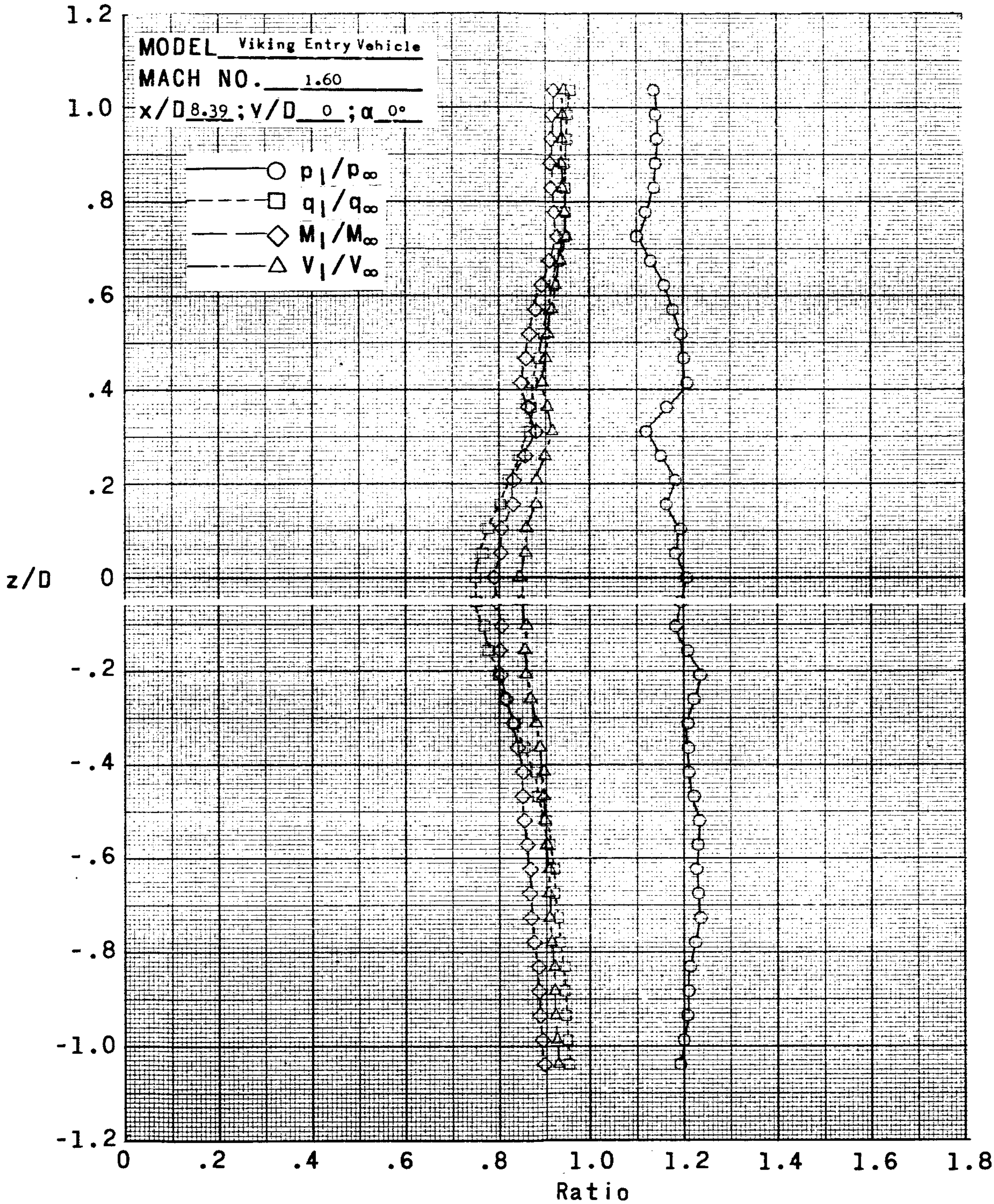
(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^0$.

Figure 5.- Continued.



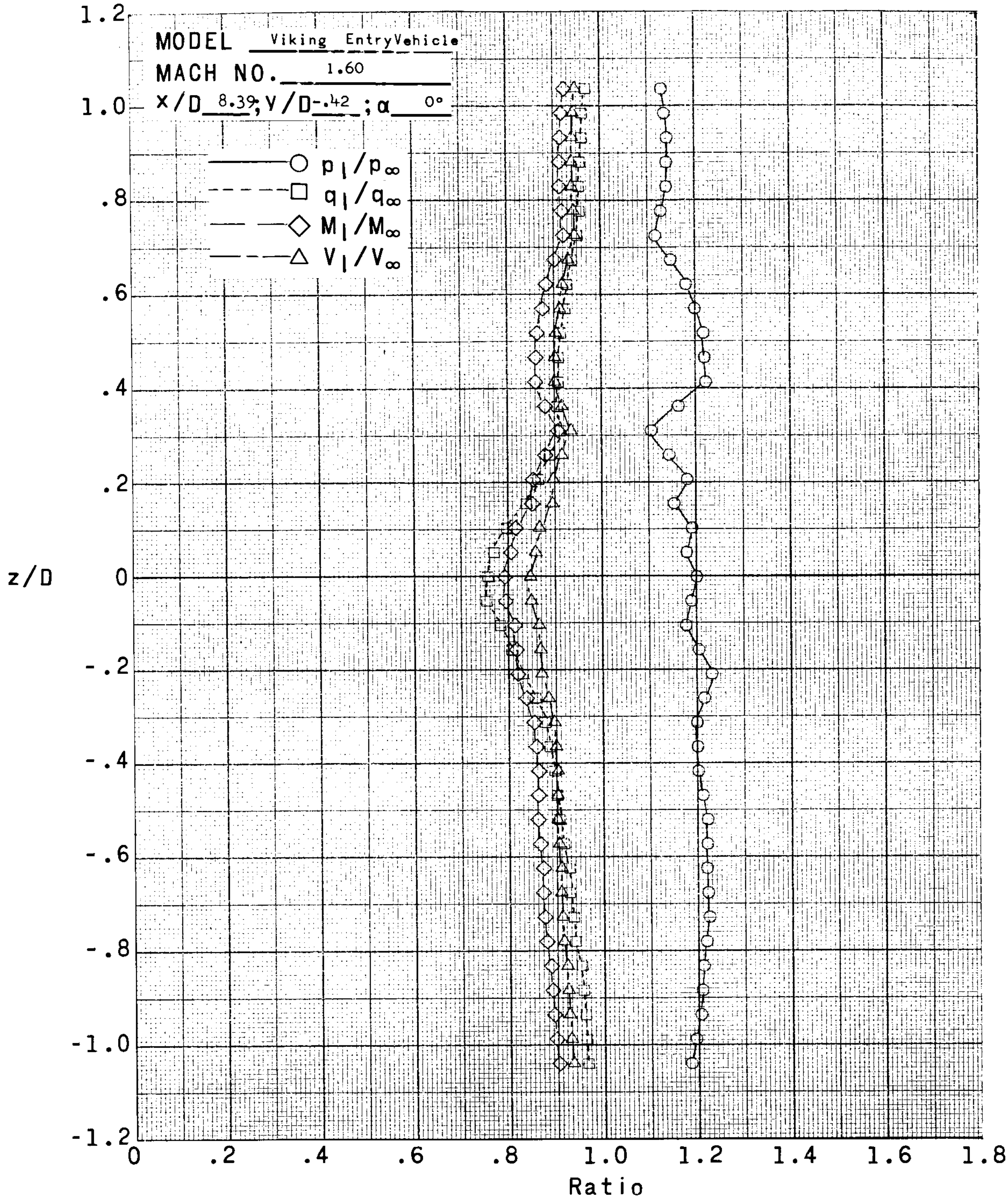
(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^0$.

Figure 5.- Continued.



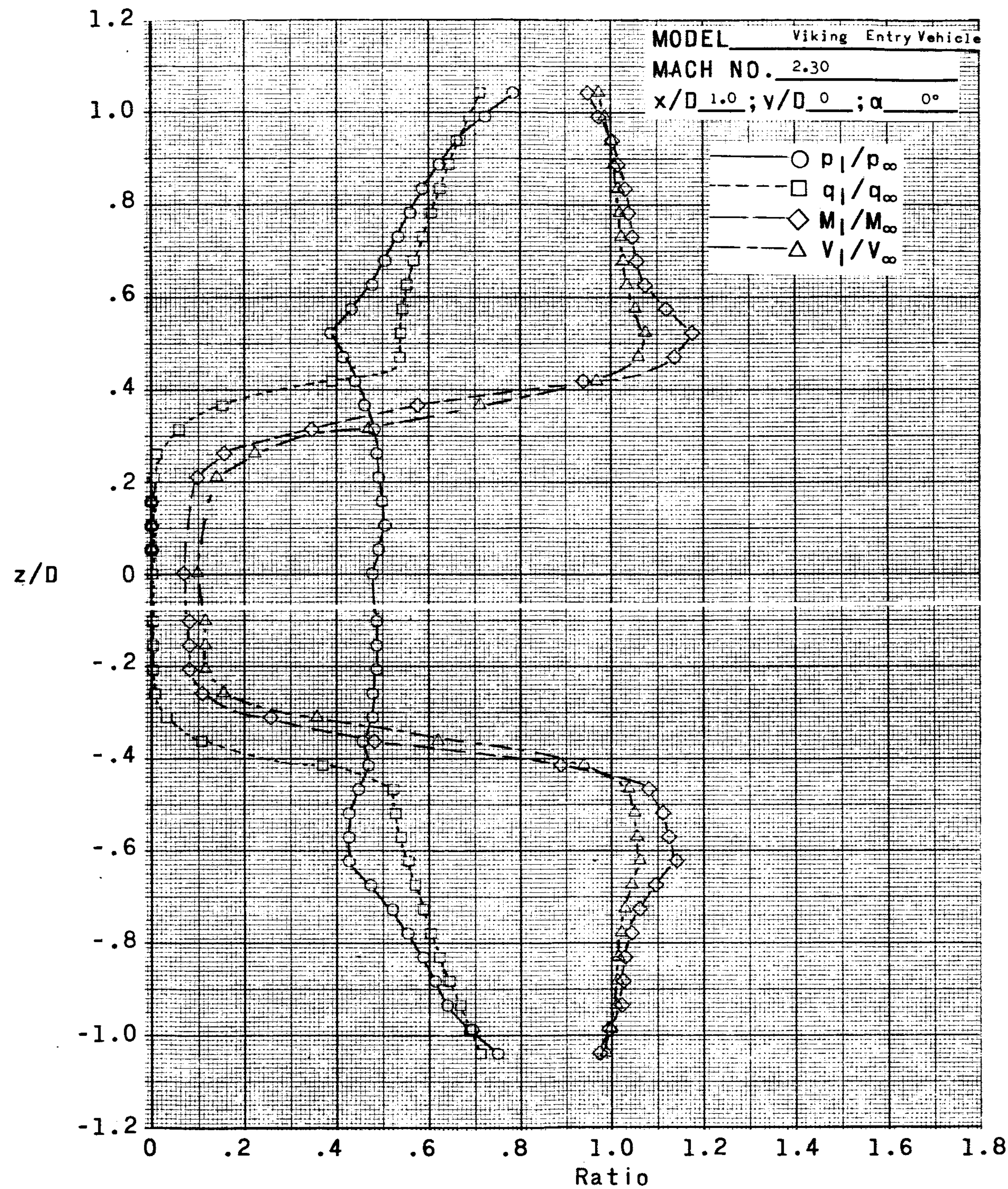
(kk) $x/D = 8.39$; $y/D = 0$; $\alpha = 0^0$.

Figure 5.- Continued.



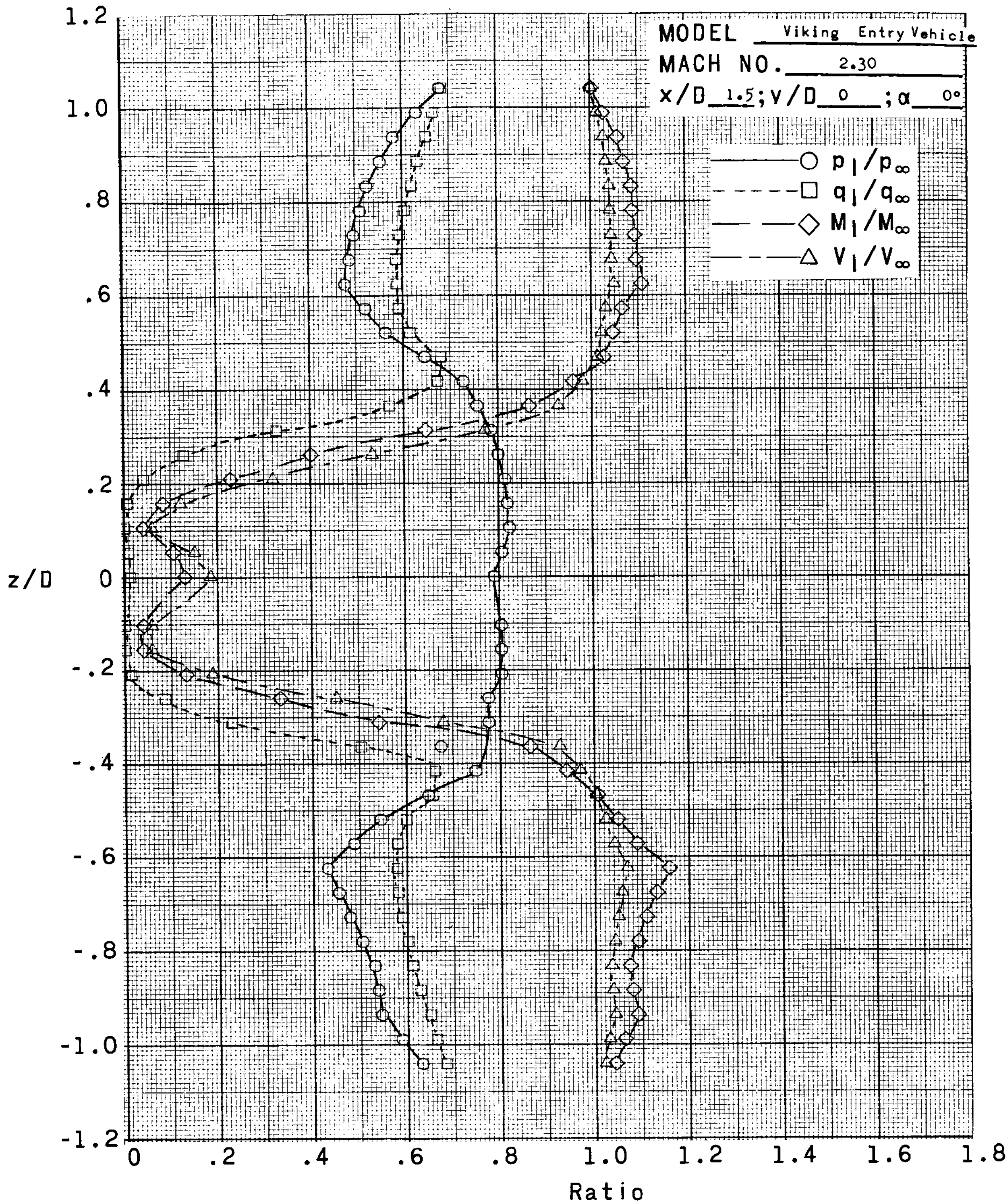
(ll) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^0$.

Figure 5.- Concluded.



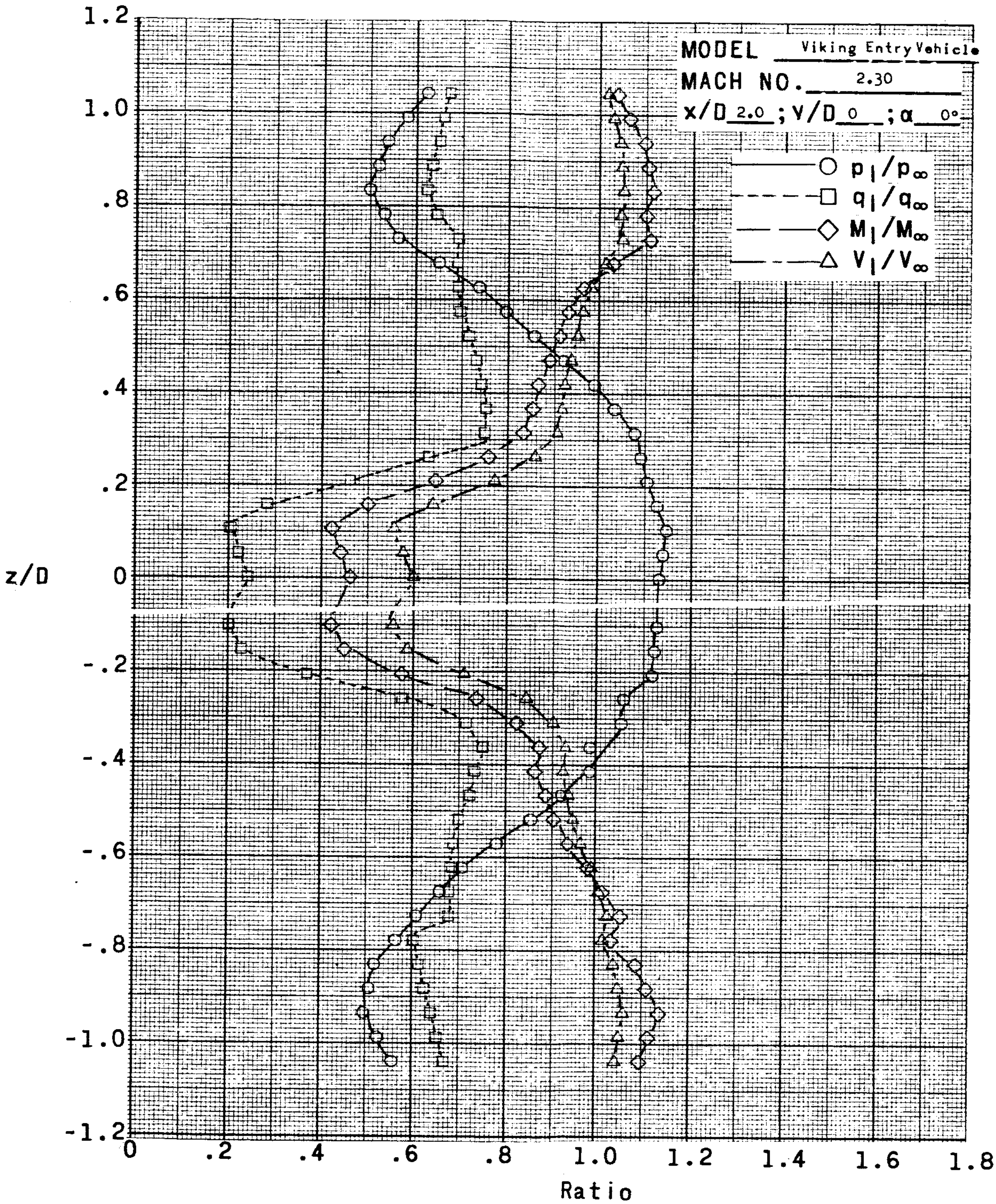
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 0^\circ$.

Figure 6.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D in the wake of the Viking Entry Vehicle at a Mach number of 2.30 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



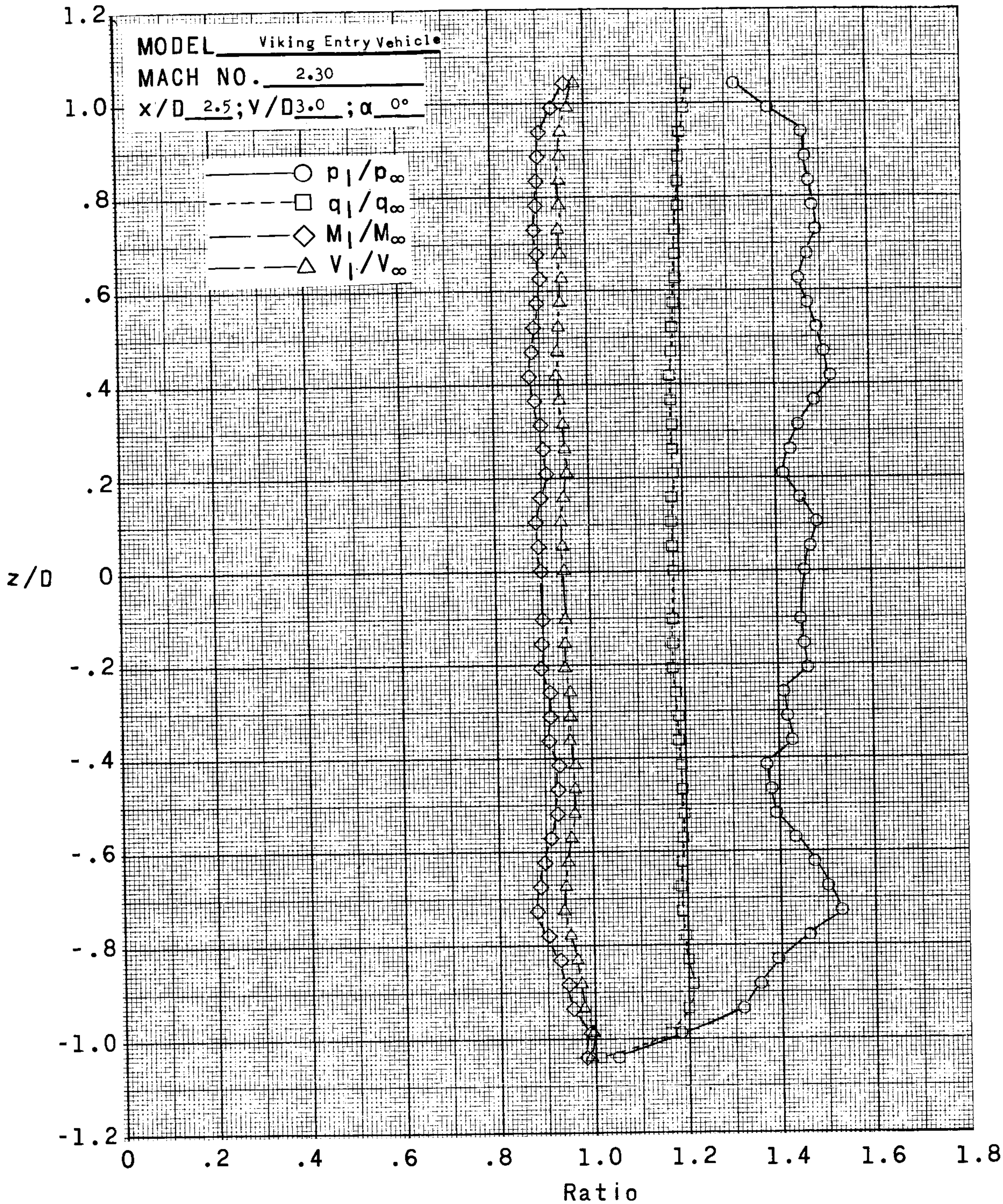
(b) x/D = 1.5; y/D = 0; α = 0°.

Figure 6.- Continued.



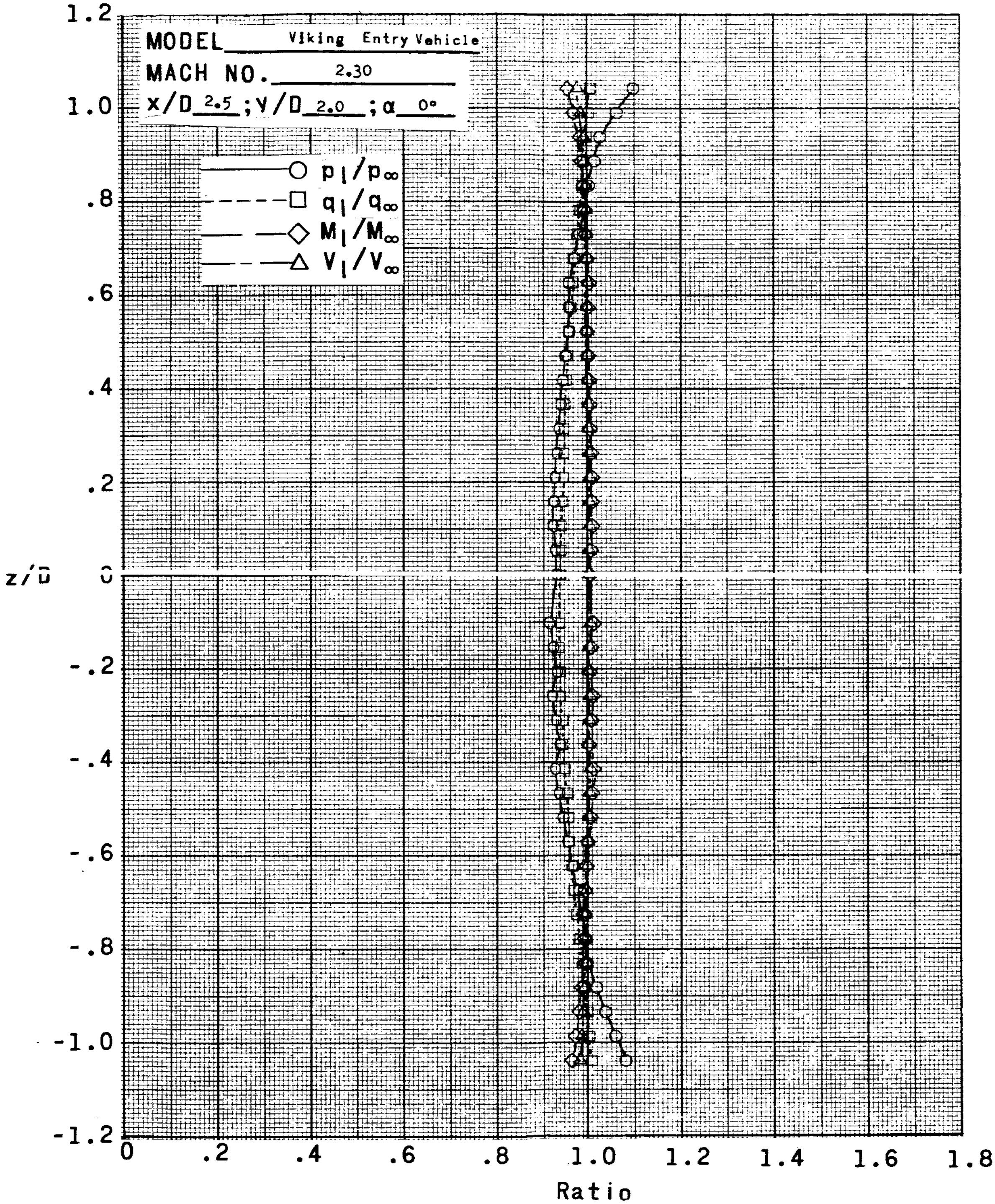
(c) x/D = 2.0; y/D = 0; α = 0°.

Figure 6.- Continued.



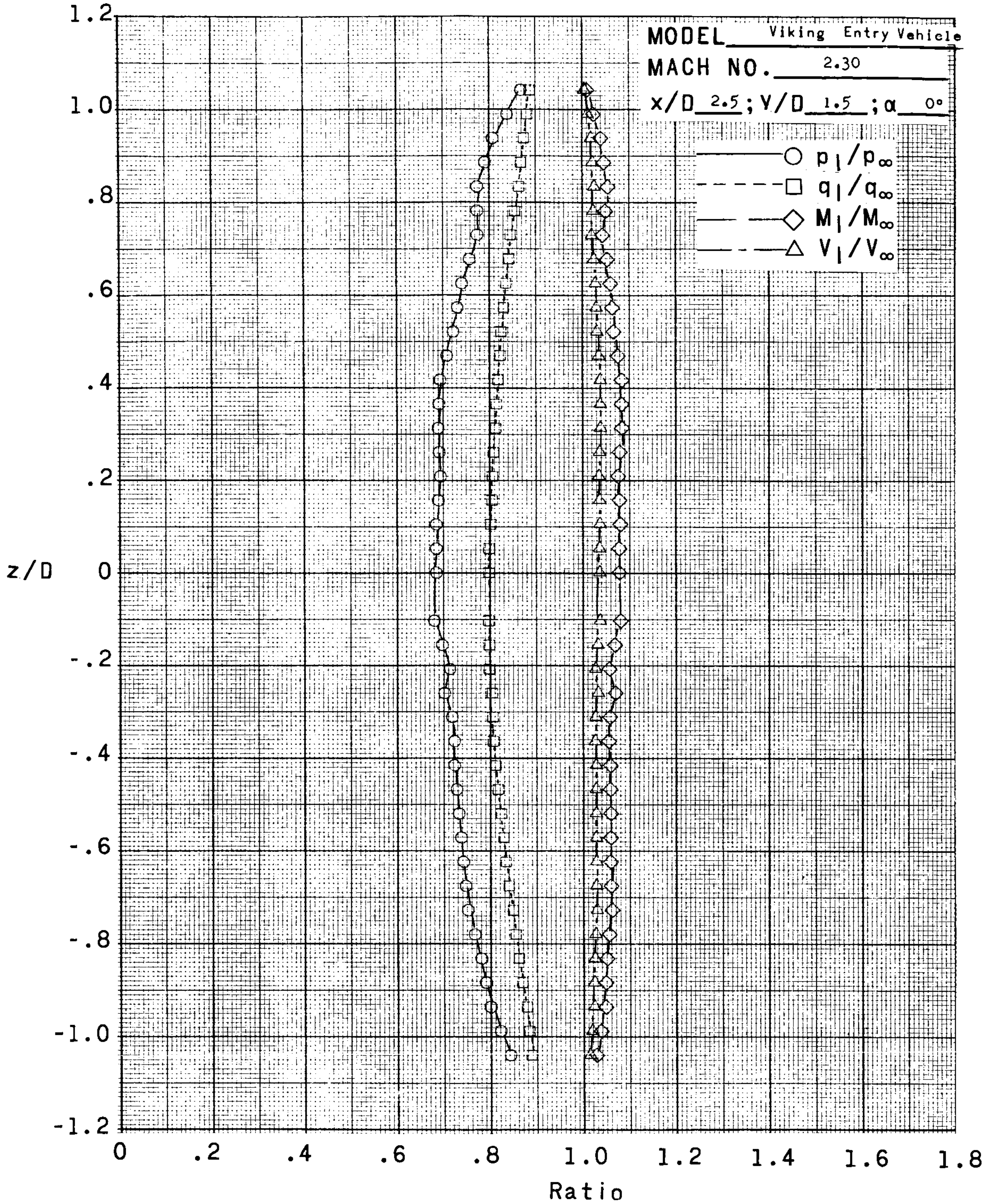
(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^0$.

Figure 6.- Continued.



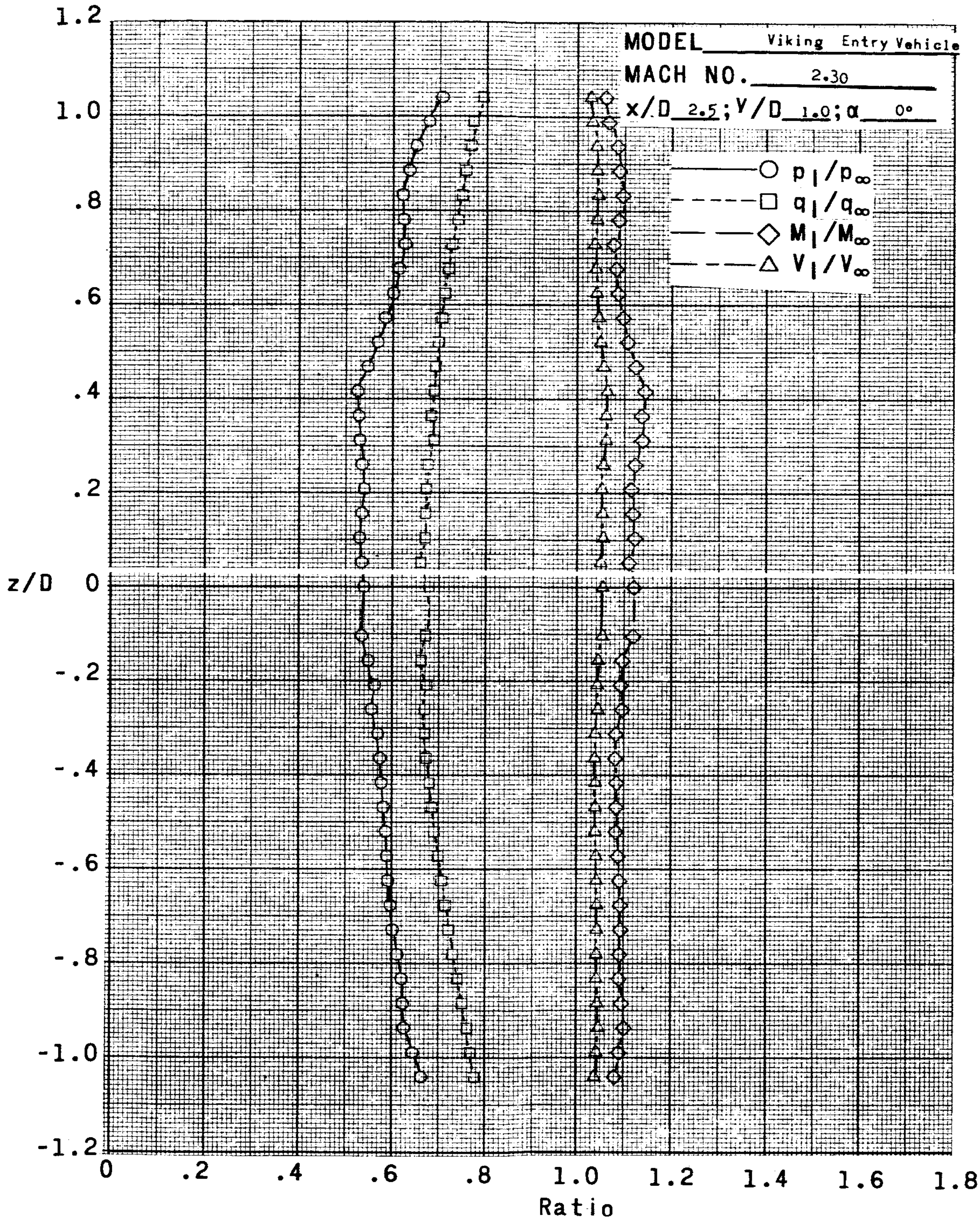
(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^0$.

Figure 6.- Continued.



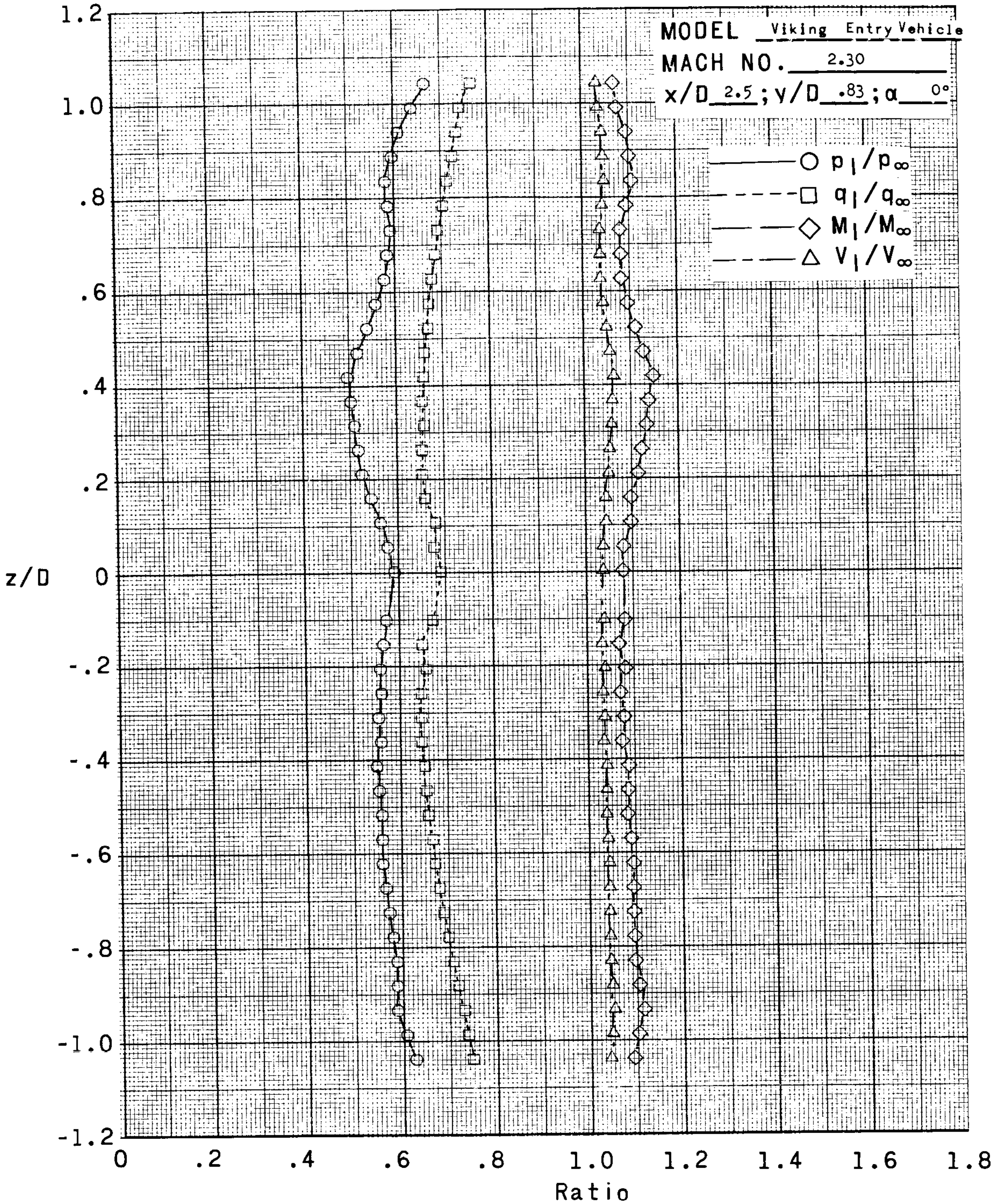
(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^{\circ}$.

Figure 6.- Continued.



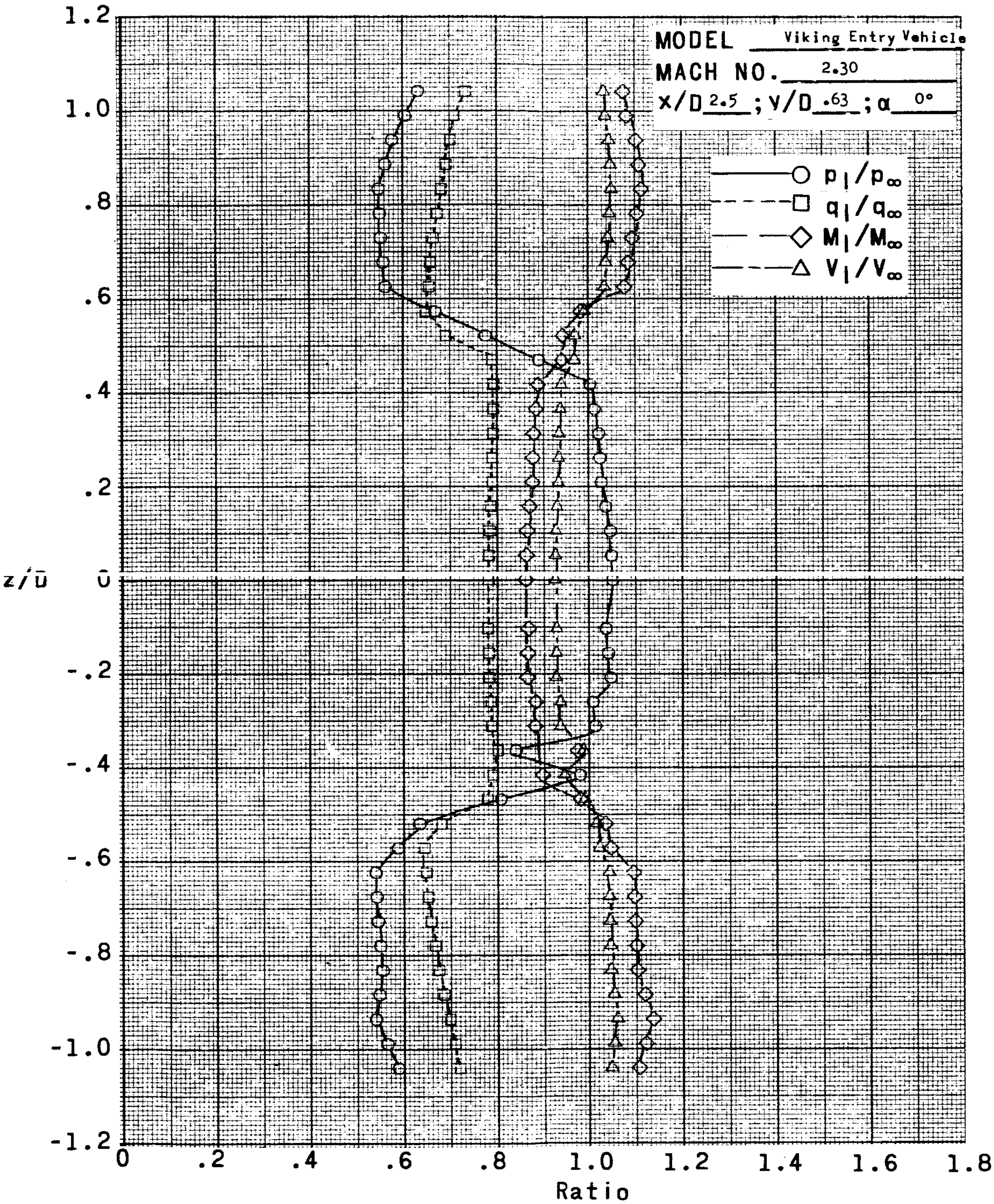
(g) x/D = 2.5; y/D = 1.0; α = 0°.

Figure 6.- Continued.



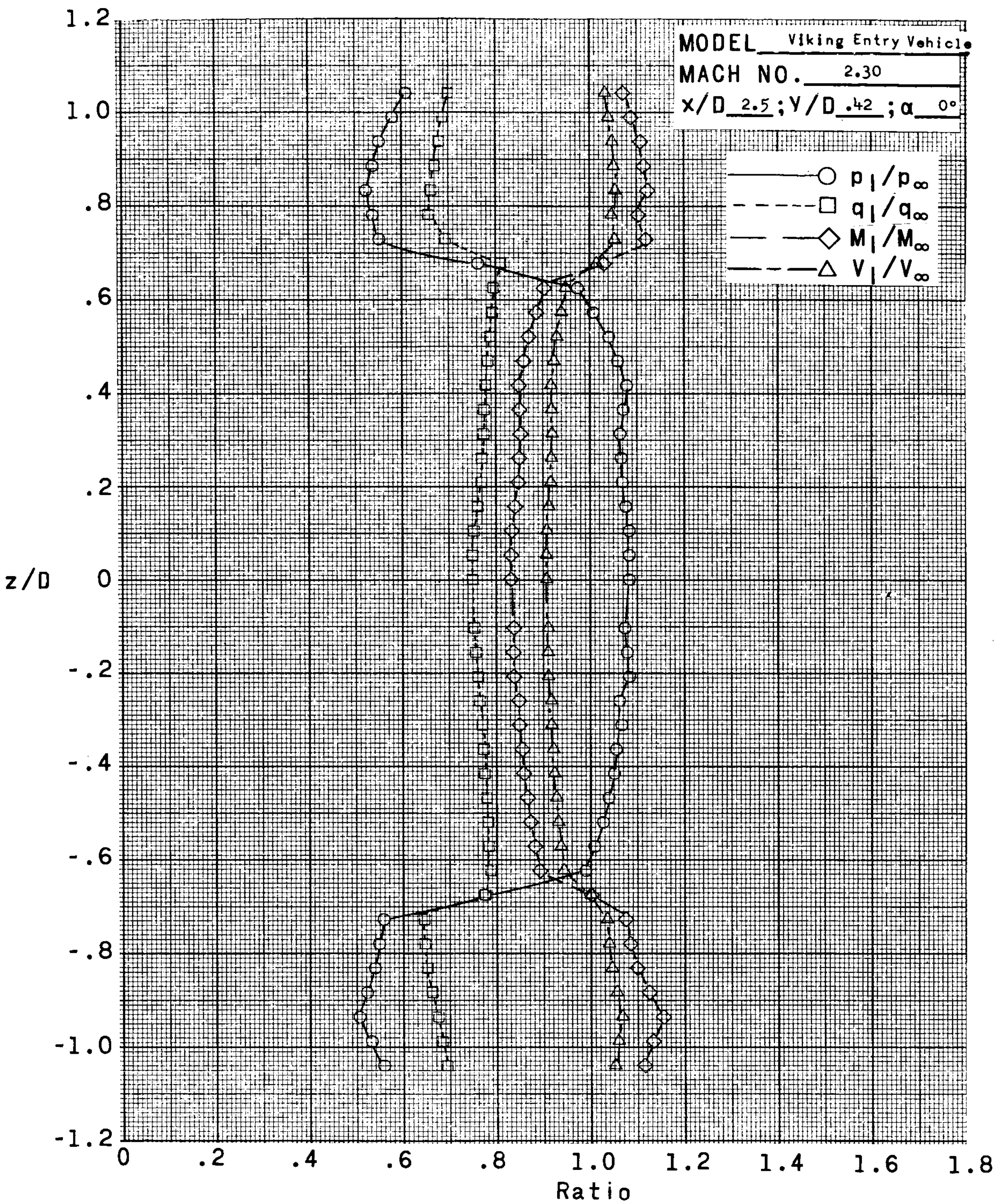
(h) $x/D = 2.5$; $y/D = 0.83$; $\alpha = 0^{0}$.

Figure 6.- Continued.



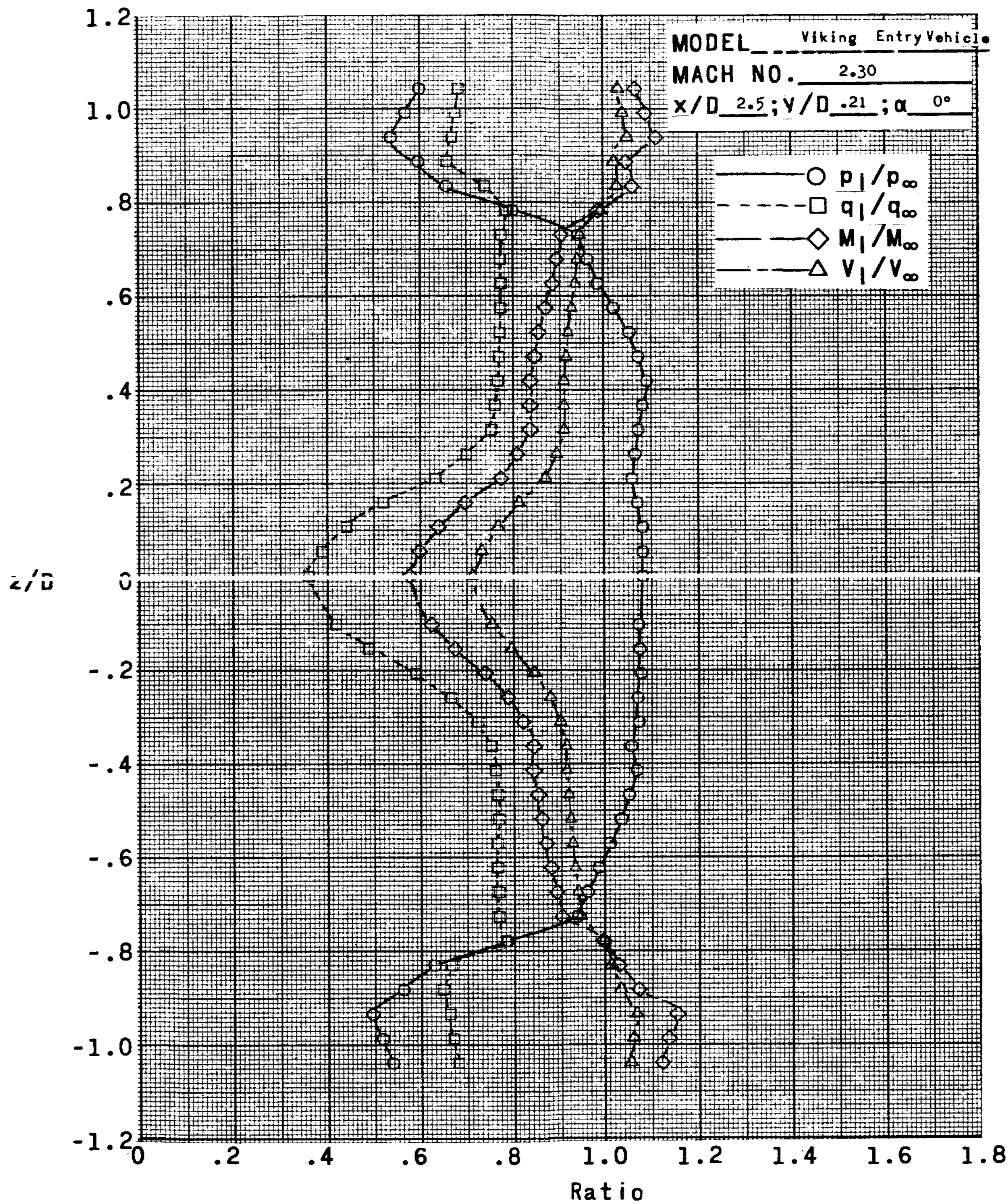
(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^0$.

Figure 6.- Continued.



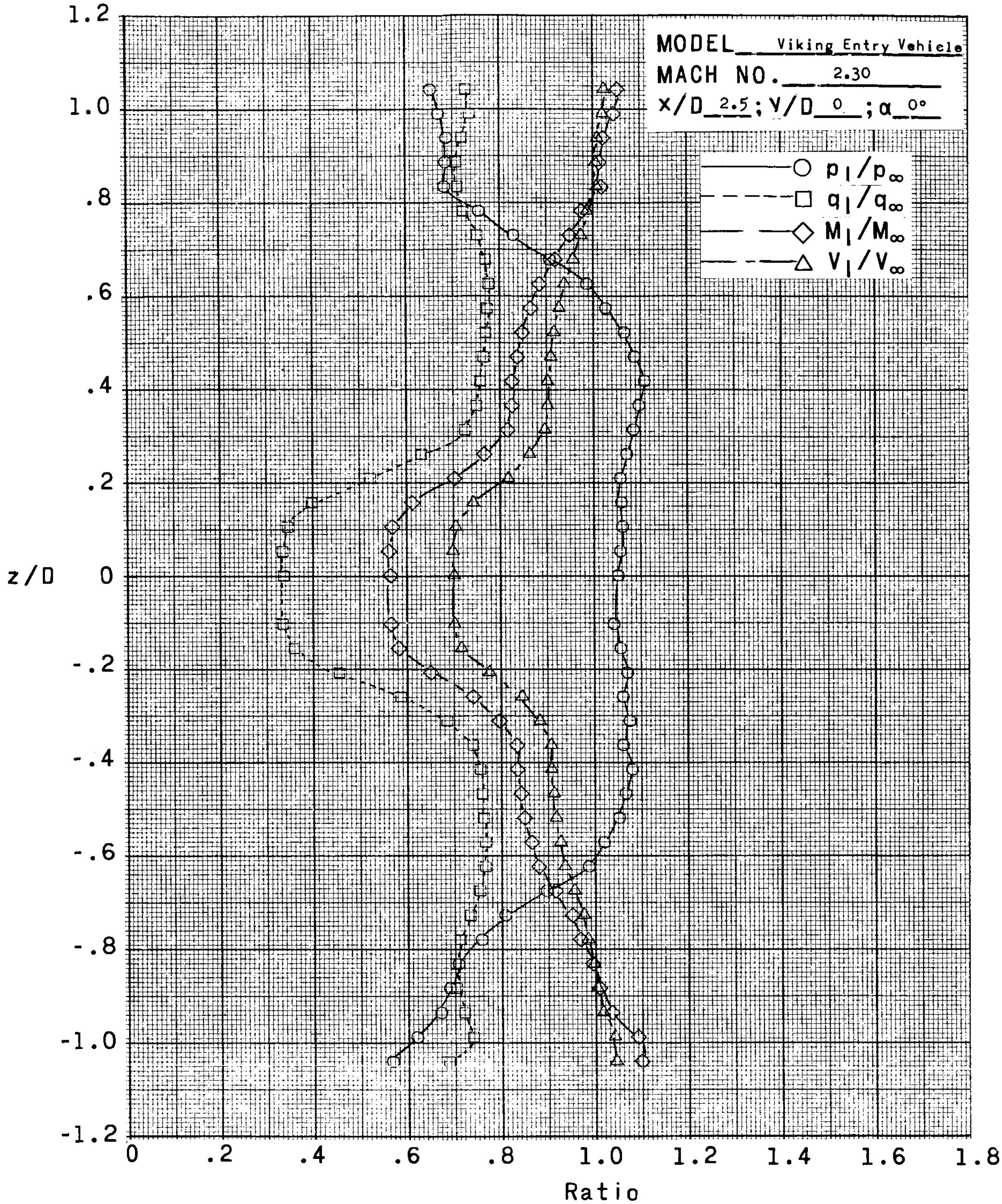
(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^0$.

Figure 6.- Continued.



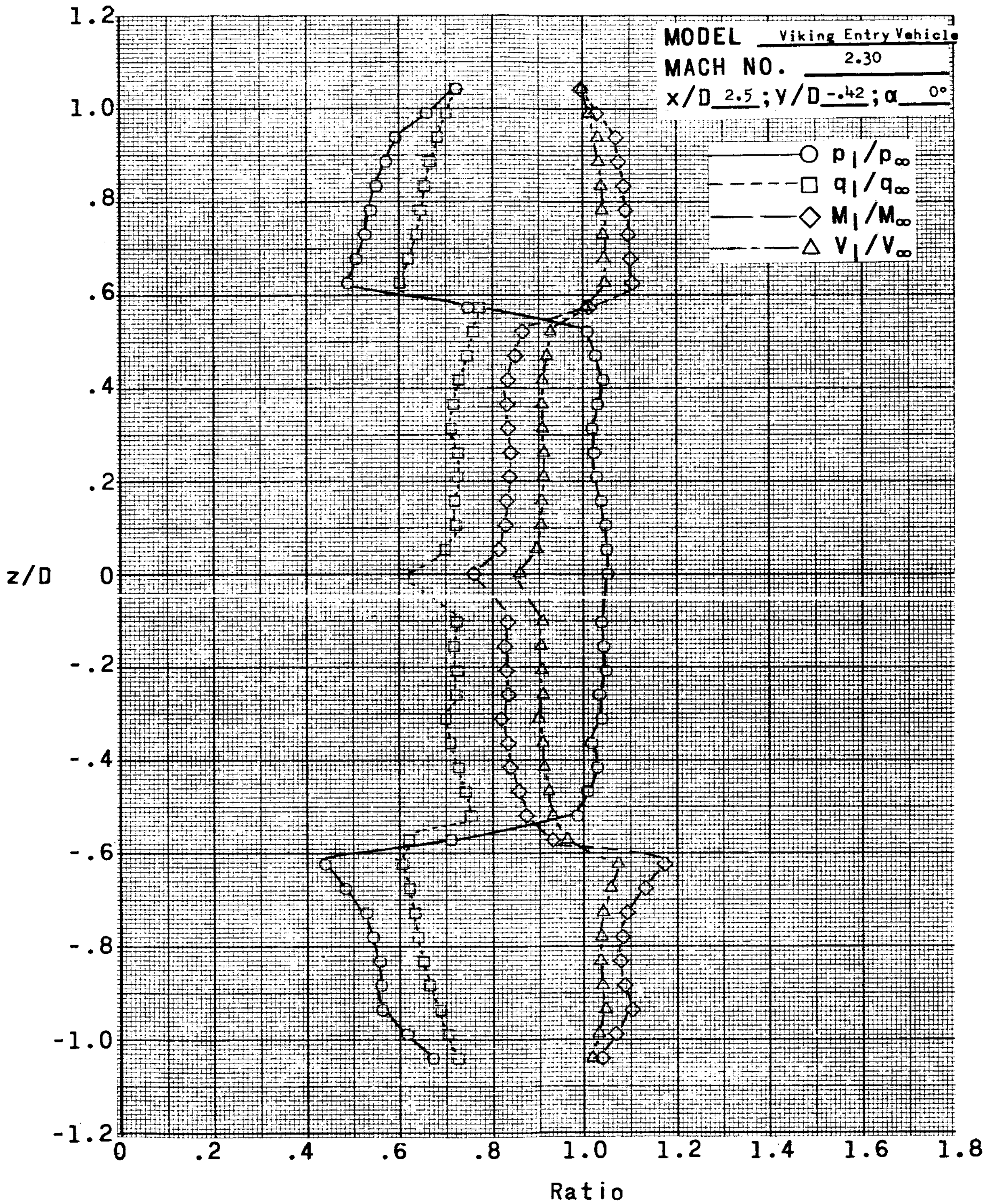
(k) $x/D = 2.5$; $y/D = 0.21$; $\alpha = 0^{0}$.

Figure 6.- Continued.



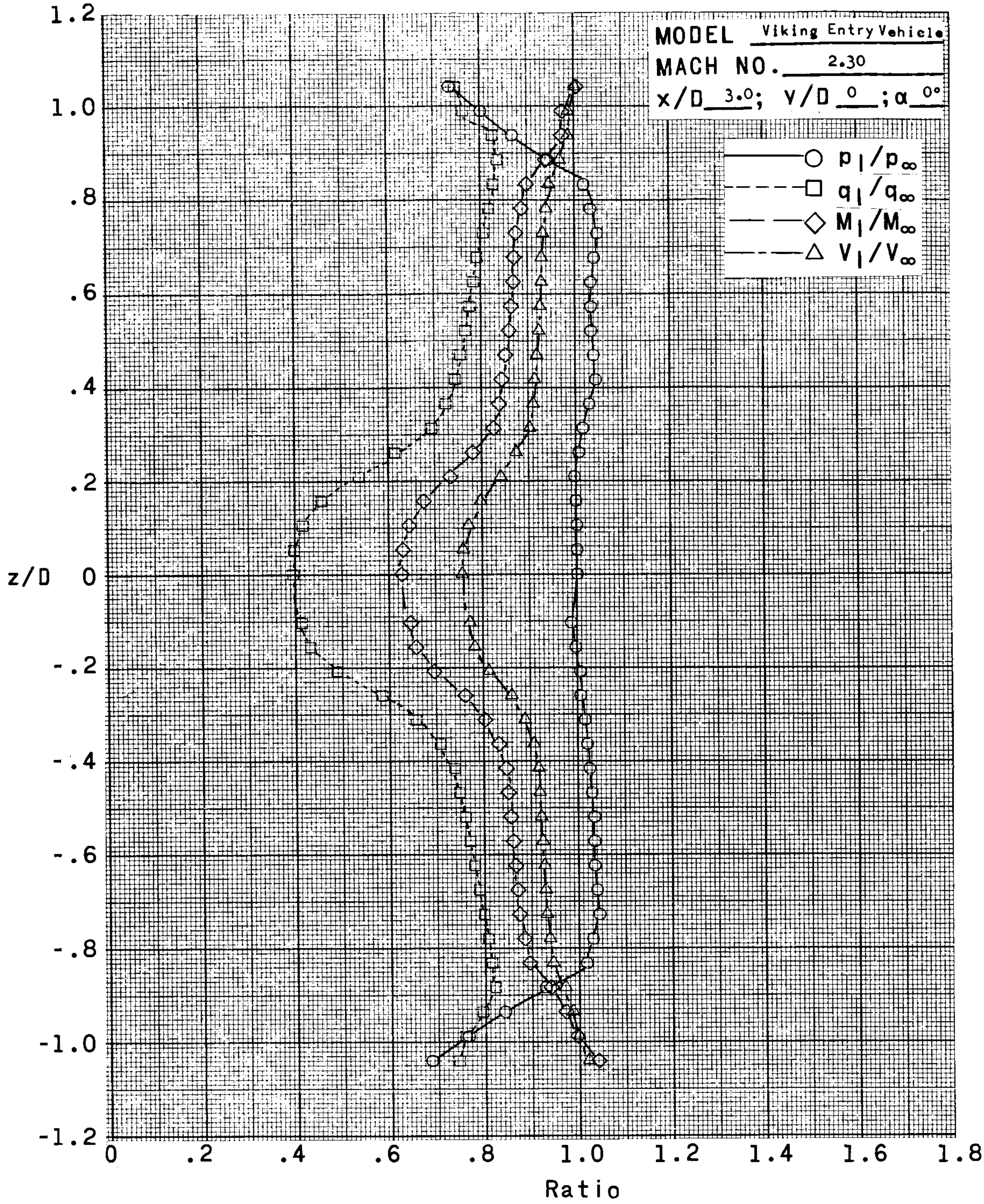
(l) $x/D = 2.5$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 6.- Continued.



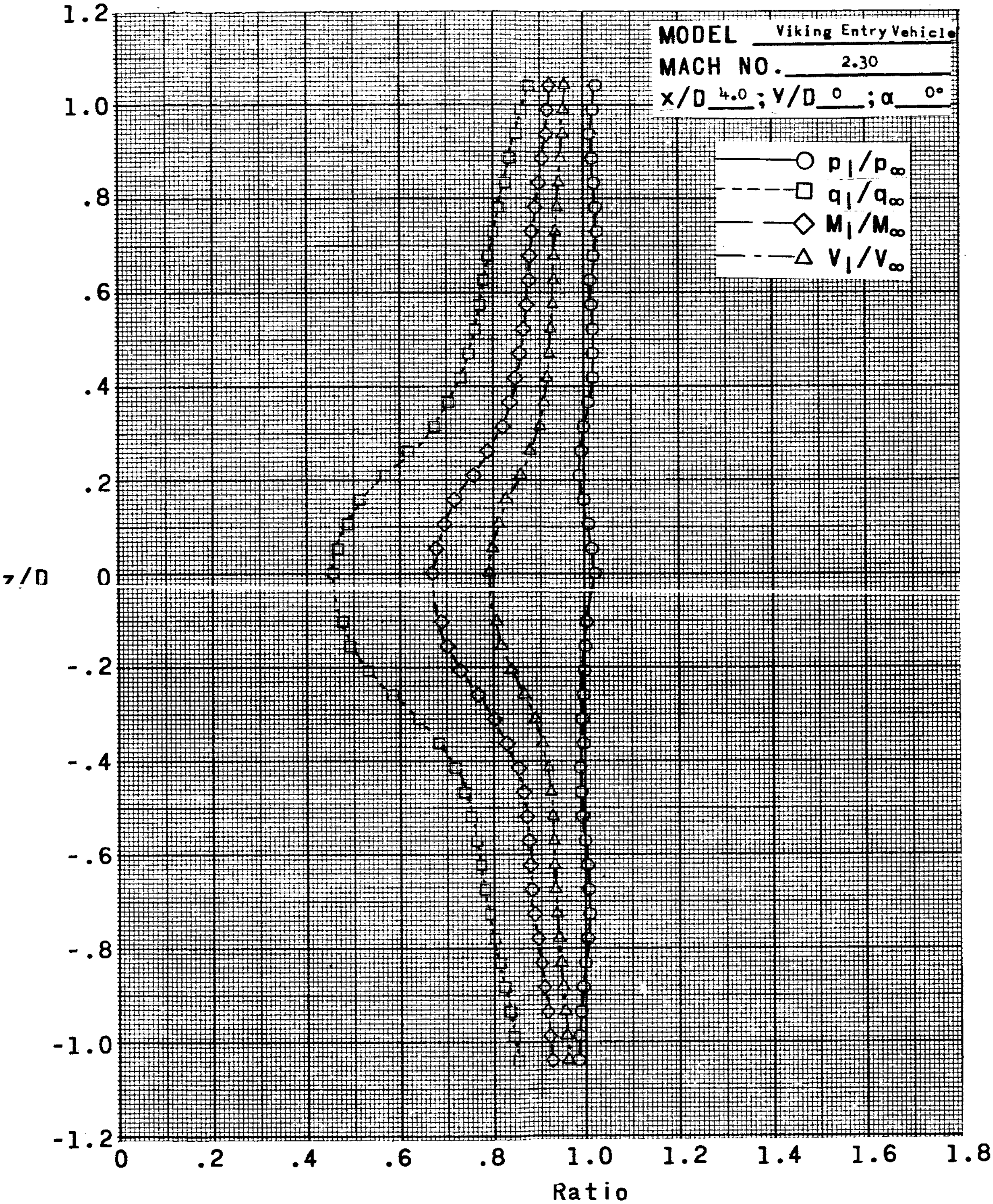
(m) x/D = 2.5; y/D = -0.42; α = 0°.

Figure 6.- Continued.



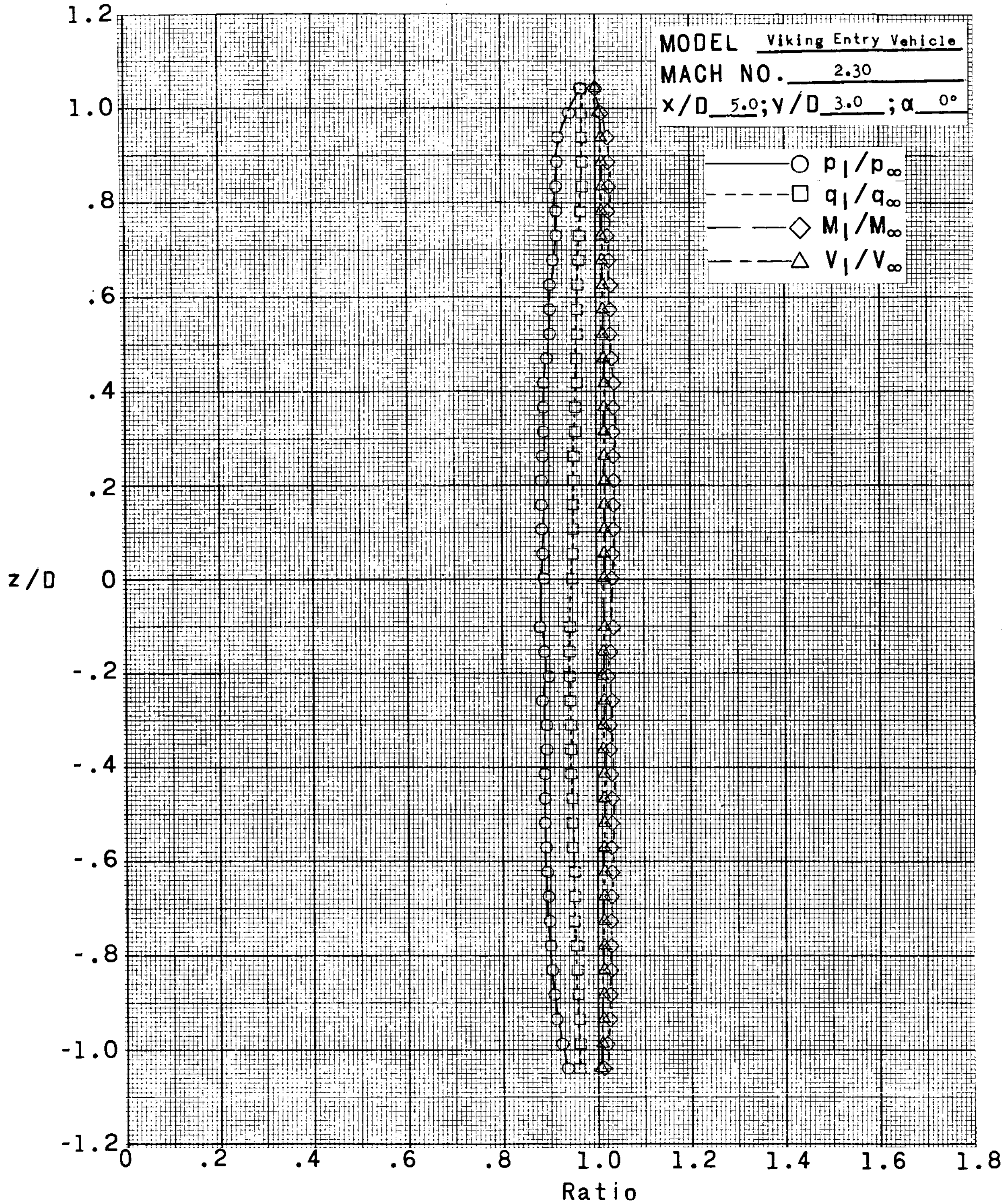
(n) x/D = 3.0; y/D = 0; α = 0°.

Figure 6.- Continued.



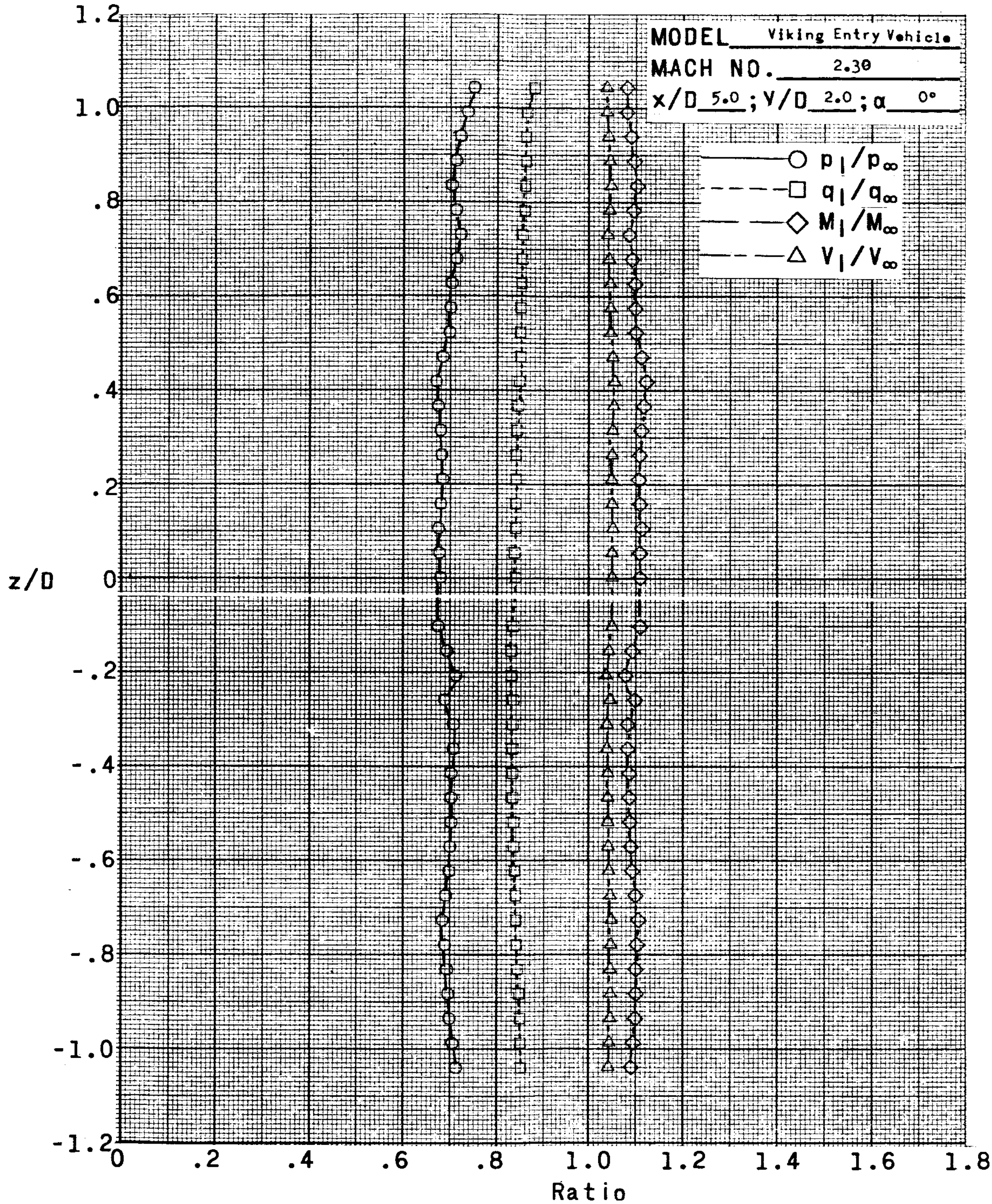
(o) $x/D = 4.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 6.- Continued.



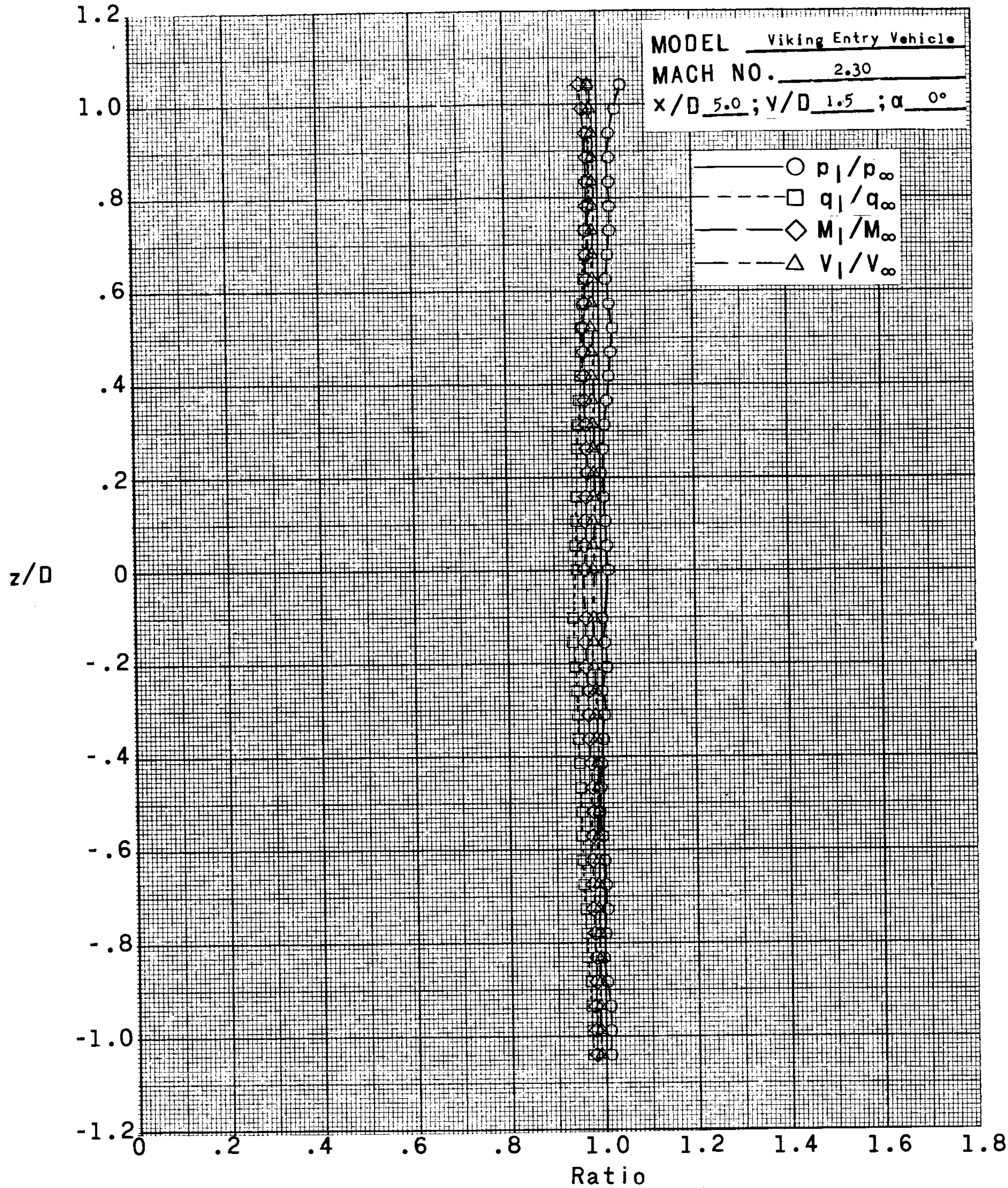
(p) x/D = 5.0; y/D = 3.0; α = 0°.

Figure 6.- Continued.



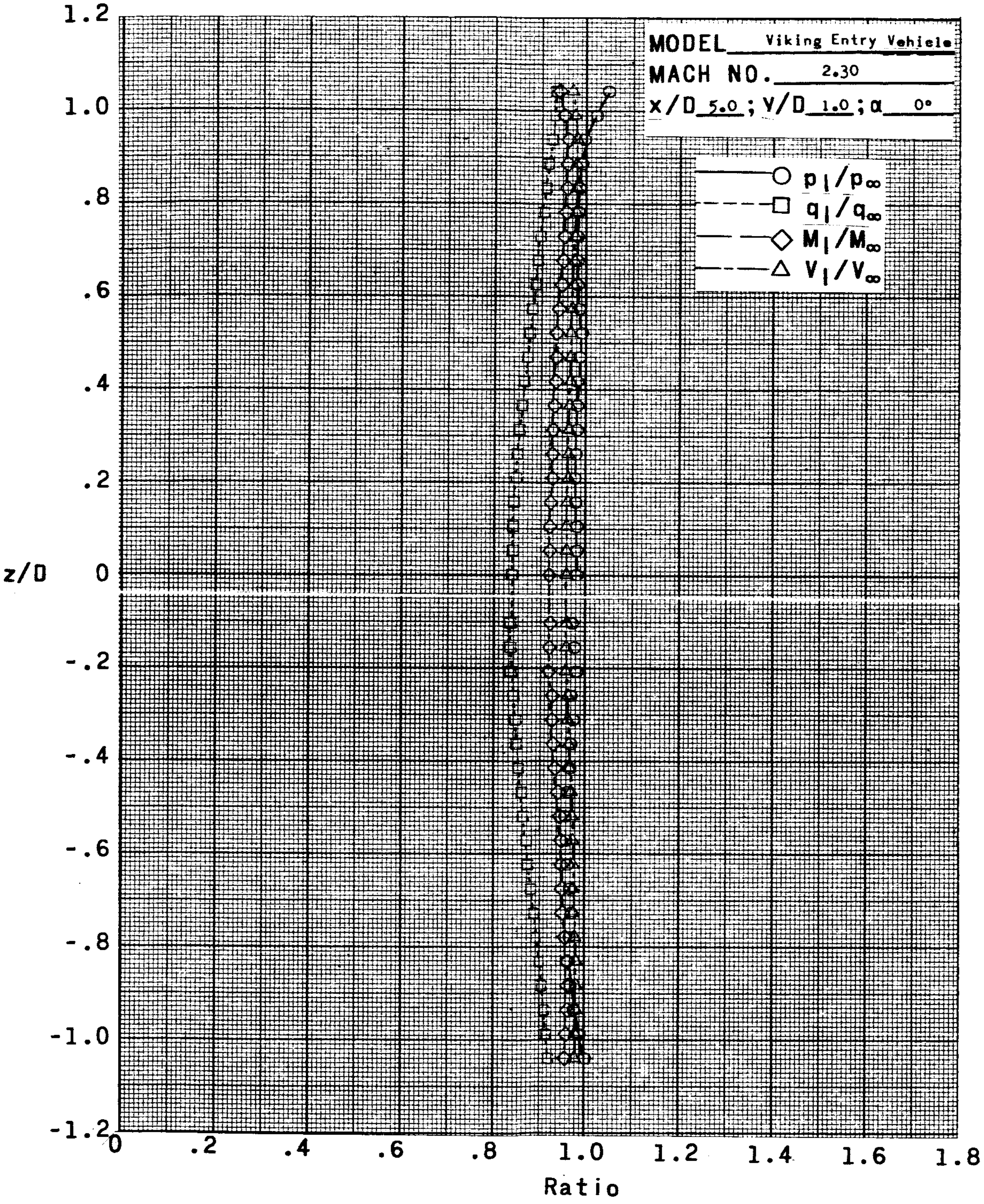
(q) x/D = 5.0; y/D = 2.0; α = 0°.

Figure 6.- Continued.



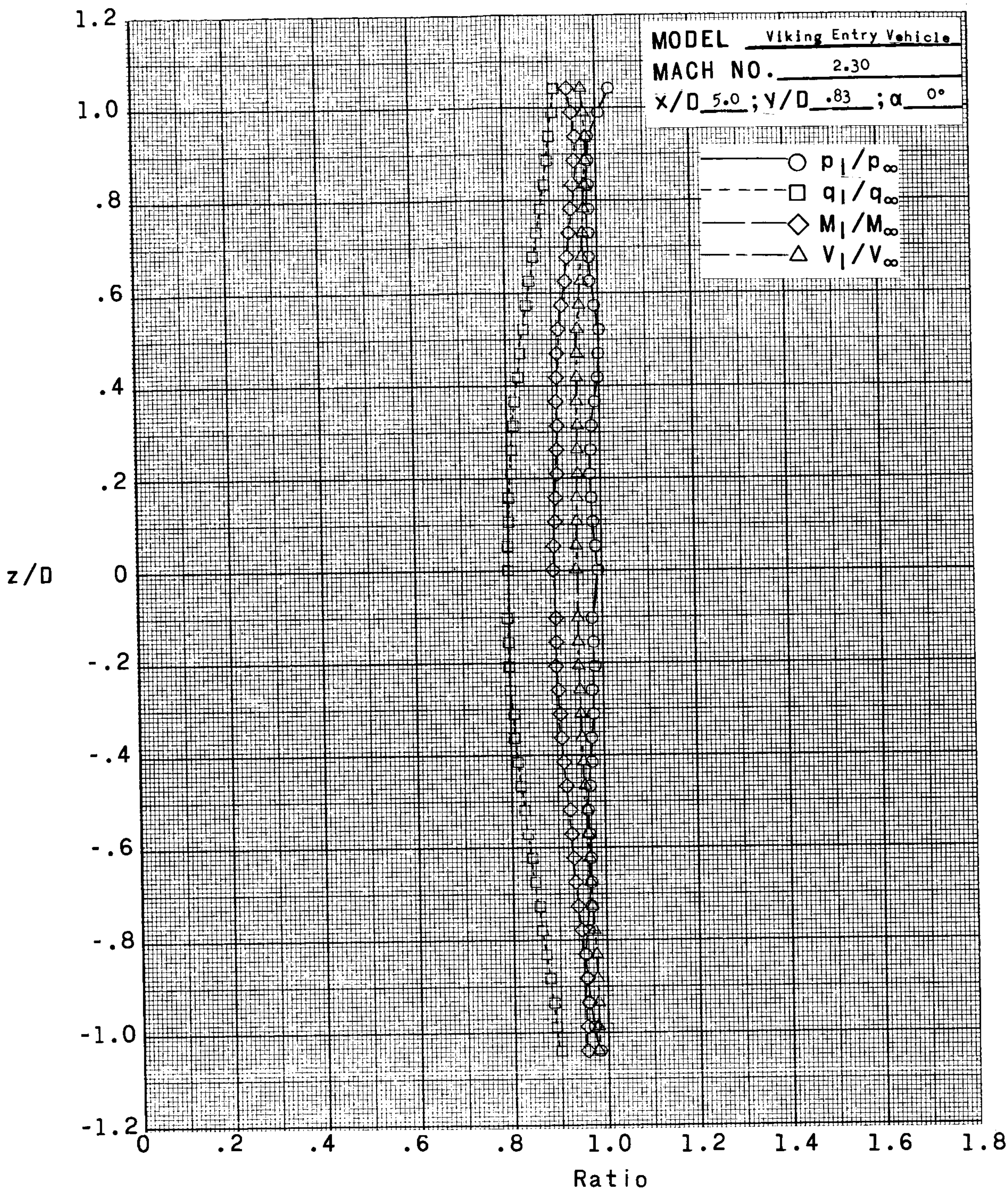
(r) x/D = 5.0; y/D = 1.5; α = 0°.

Figure 6.- Continued.



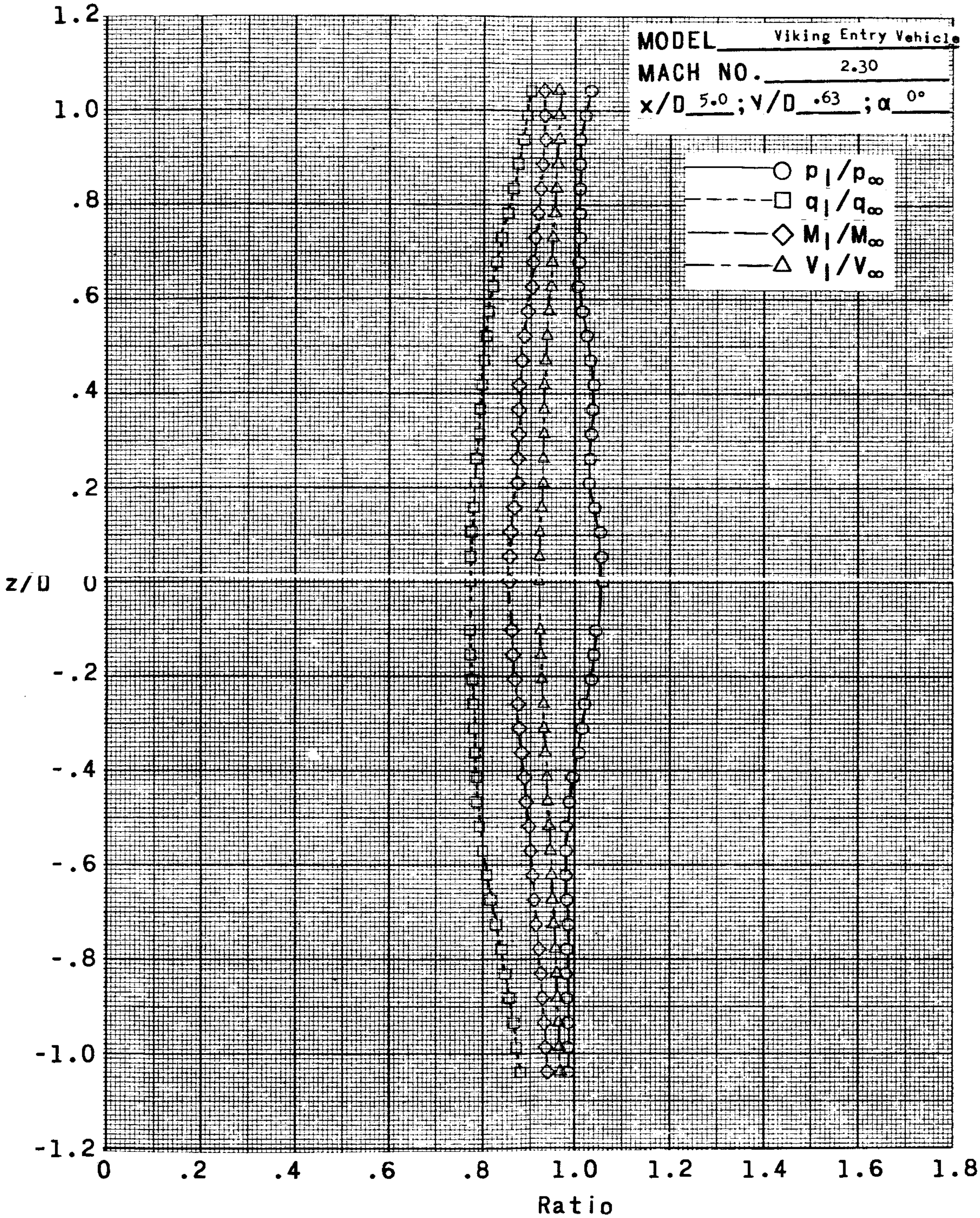
(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^{o}$.

Figure 6.- Continued.



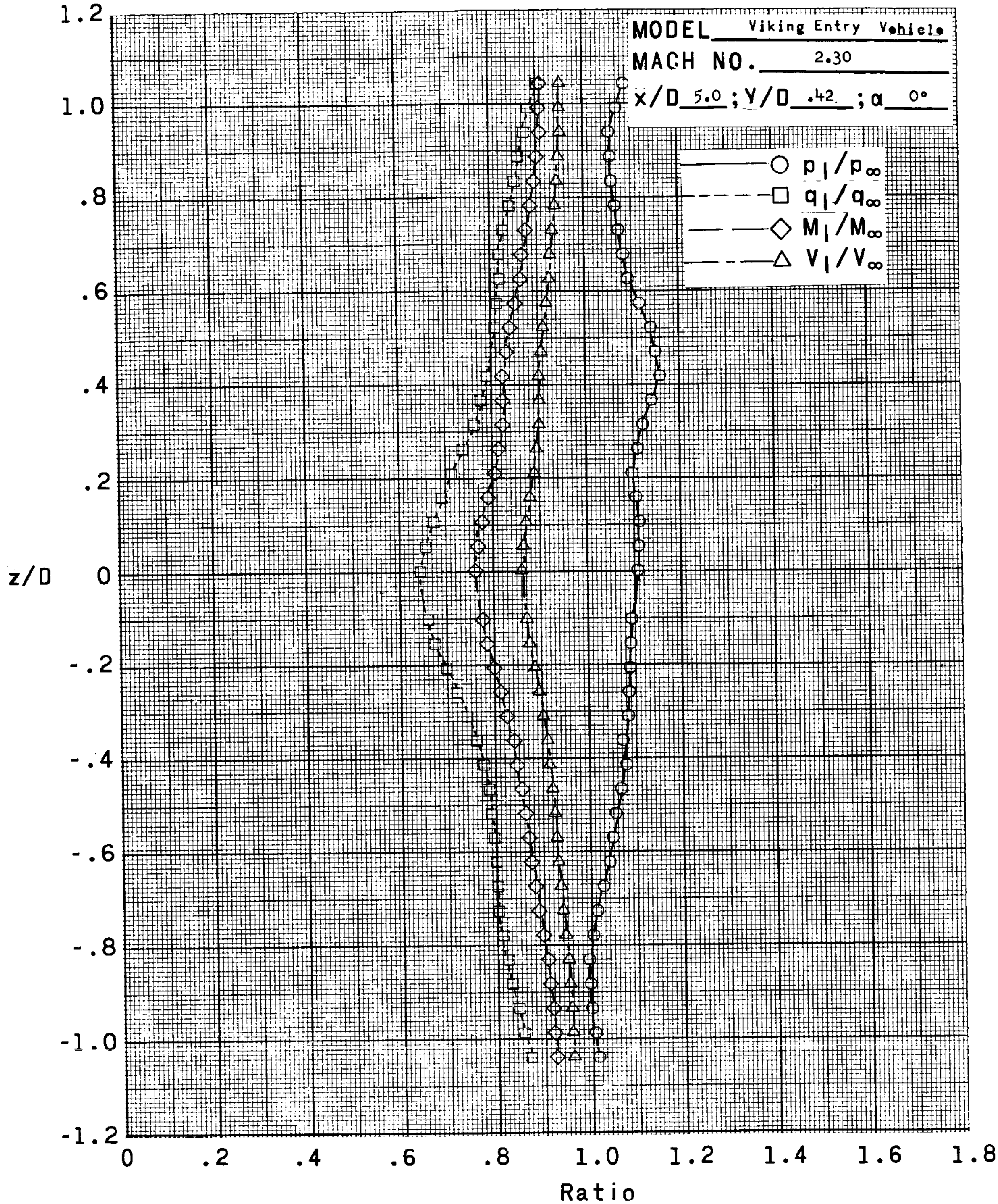
(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^{0}$.

Figure 6.- Continued.



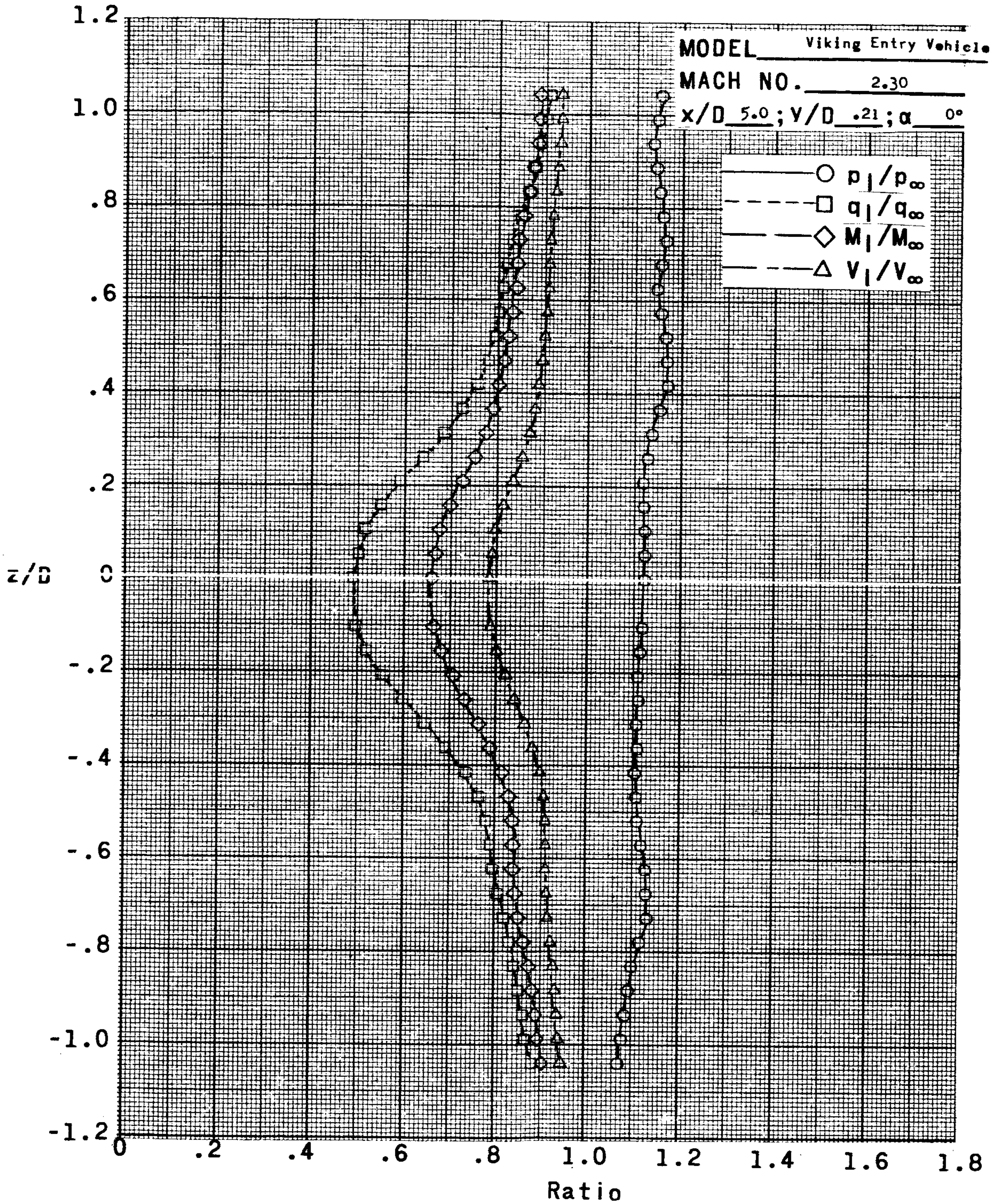
(u) x/D = 5.0; y/D = 0.63; α = 0°.

Figure 6.- Continued.



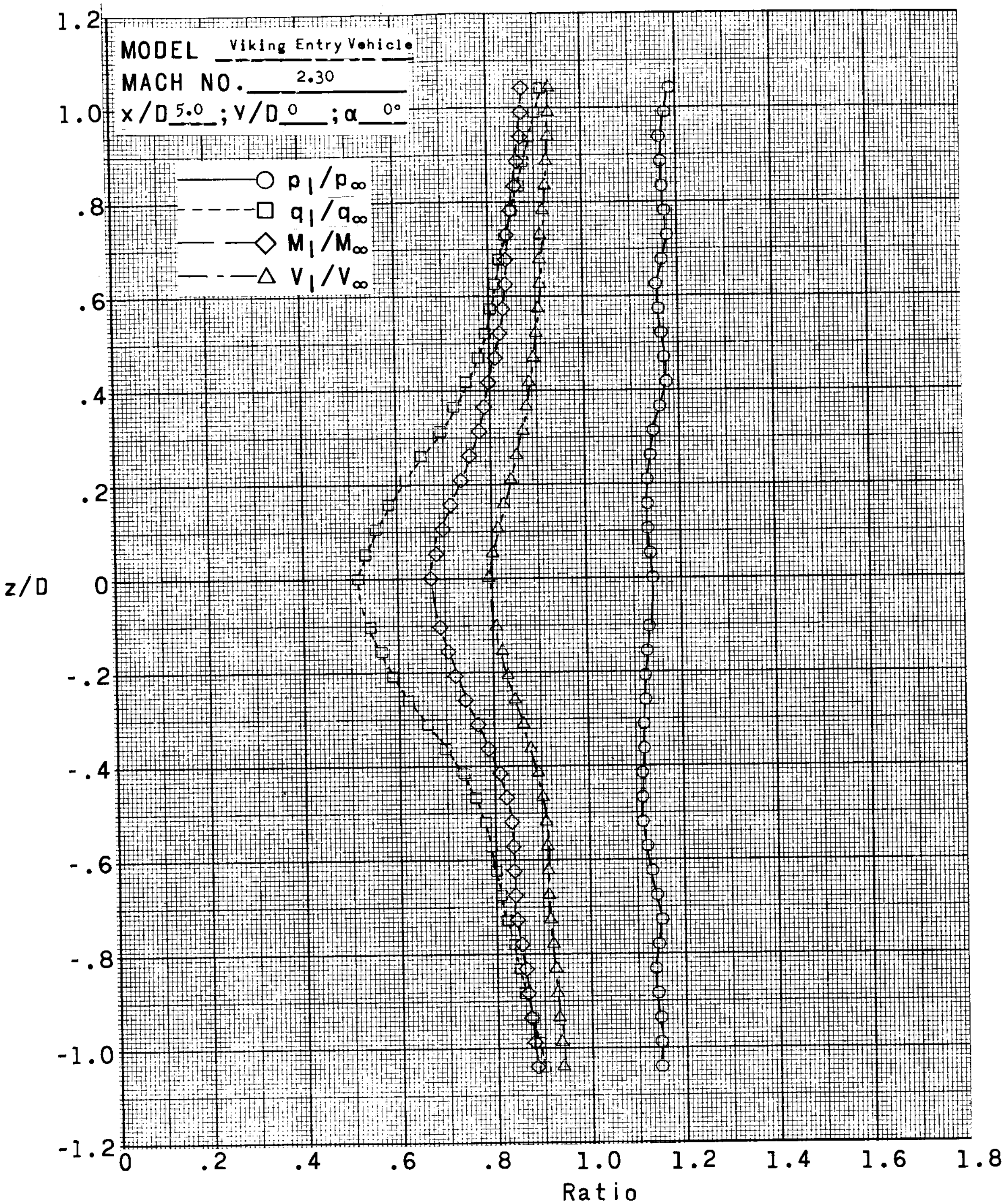
(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^0$.

Figure 6.- Continued.



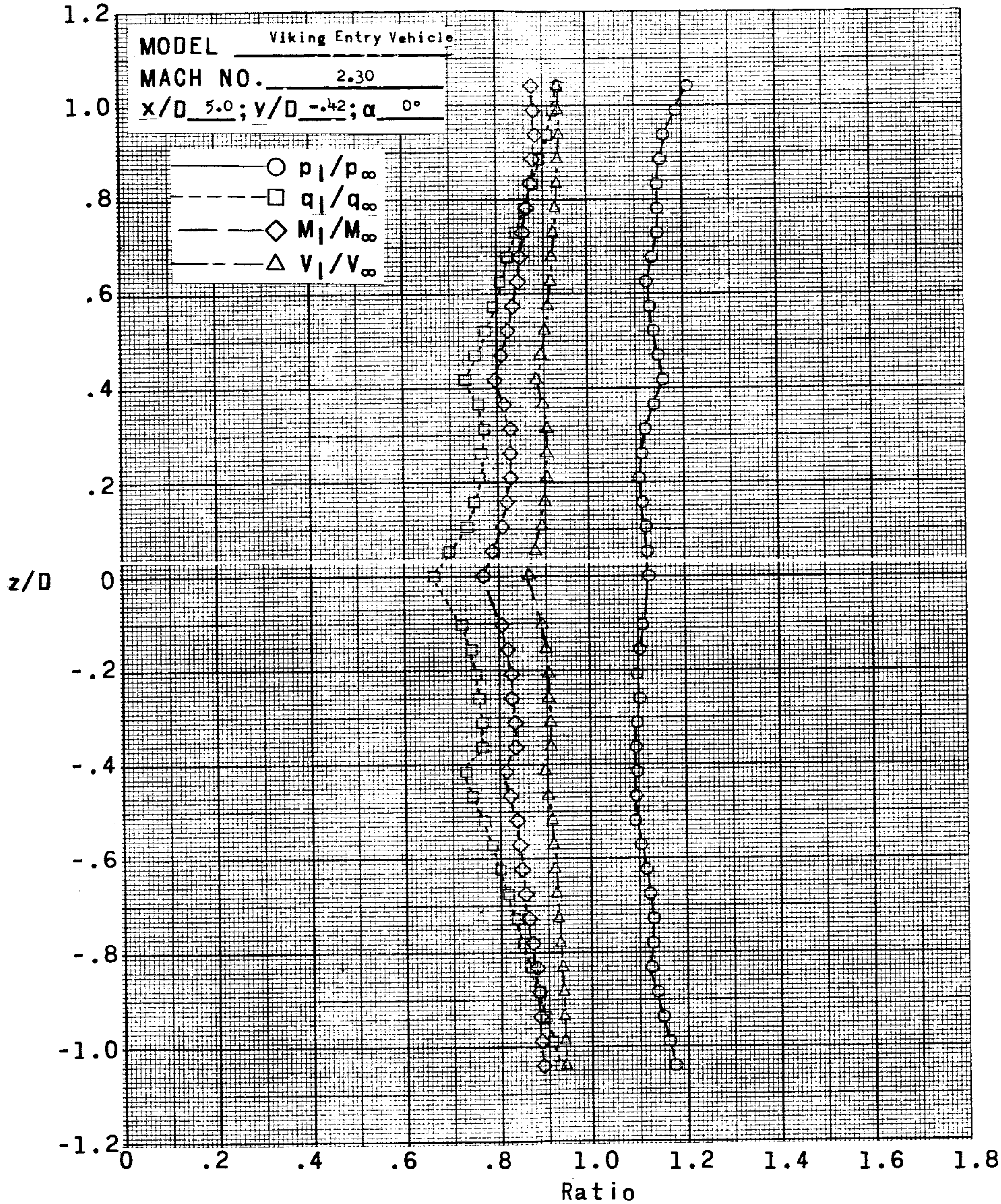
(w) x/D = 5.0; y/D = 0.21; α = 0°.

Figure 6.- Continued.



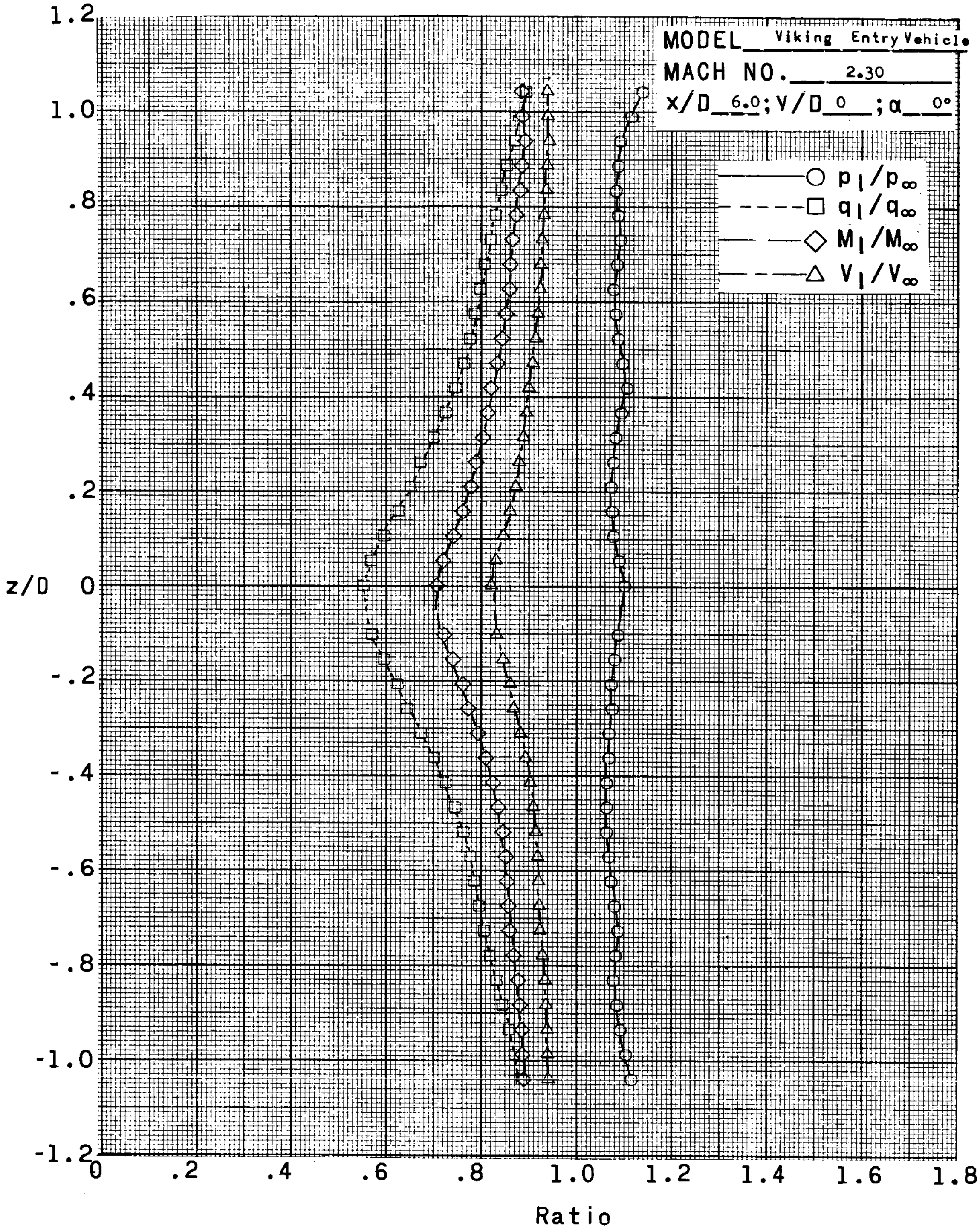
(x) x/D = 5.0; y/D = 0; α = 0°.

Figure 6.- Continued.



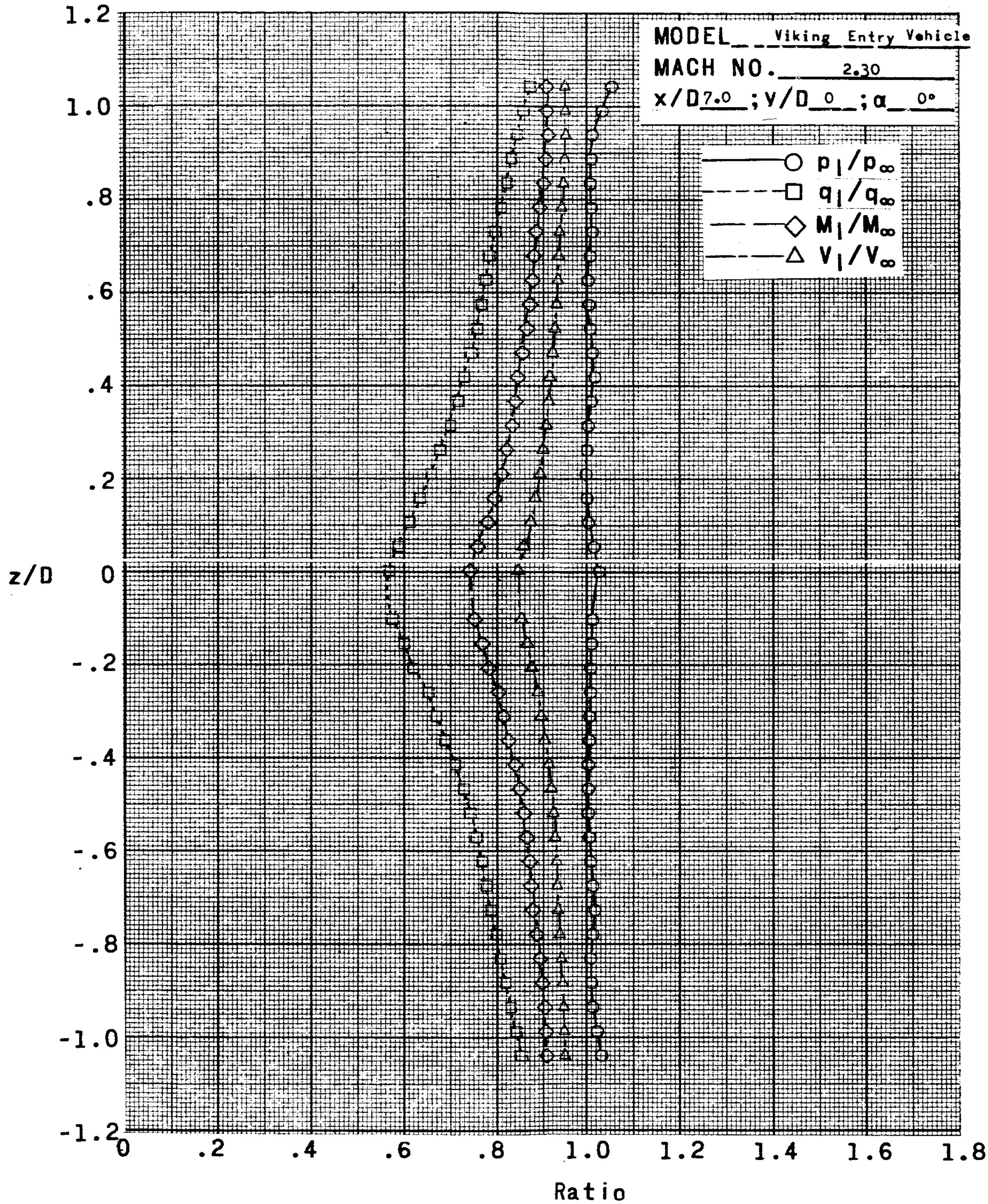
(y) x/D = 5.0; y/D = -0.42; α = 0°.

Figure 6.- Continued.



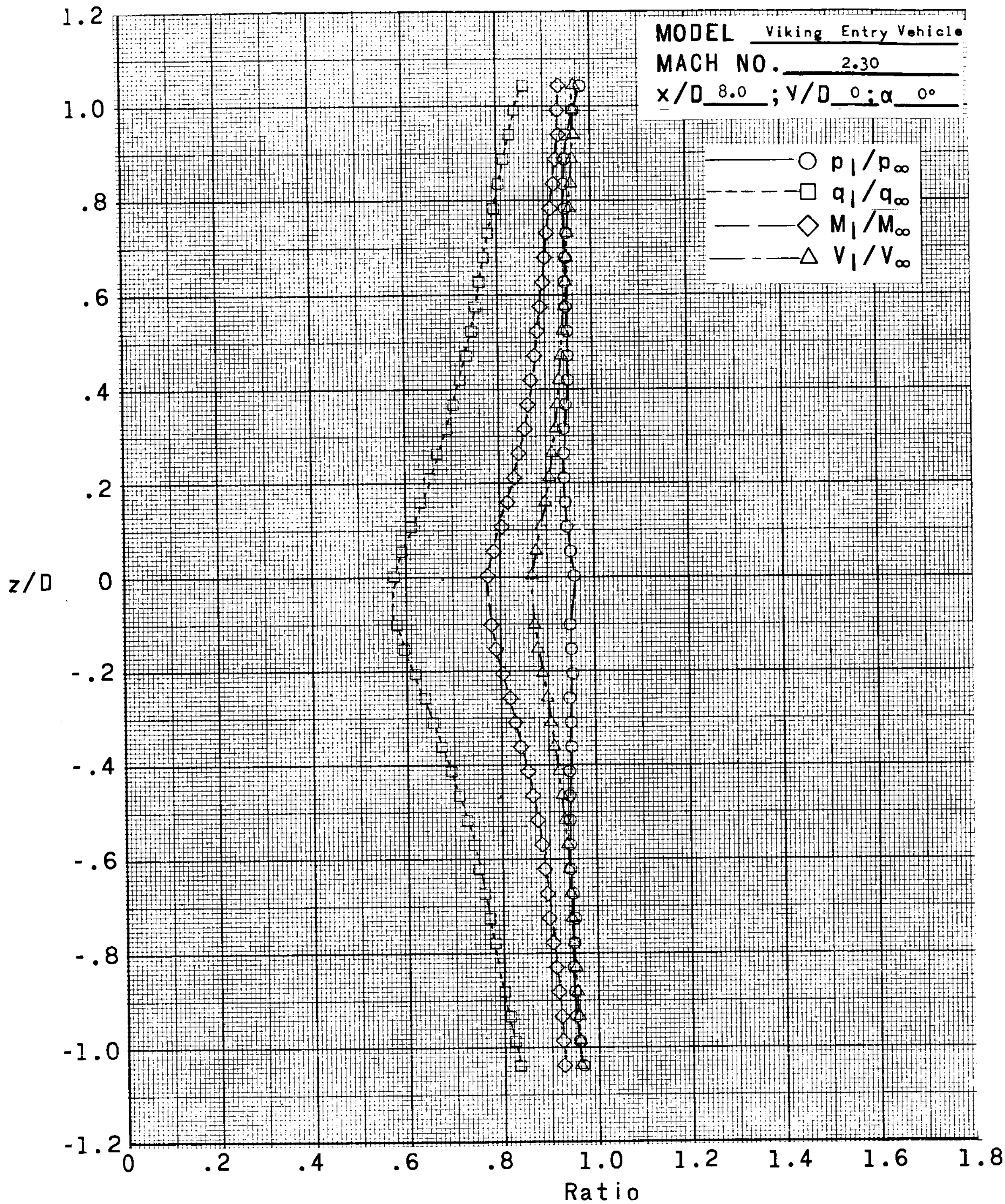
(z) $x/D = 6.0$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 6.- Continued.



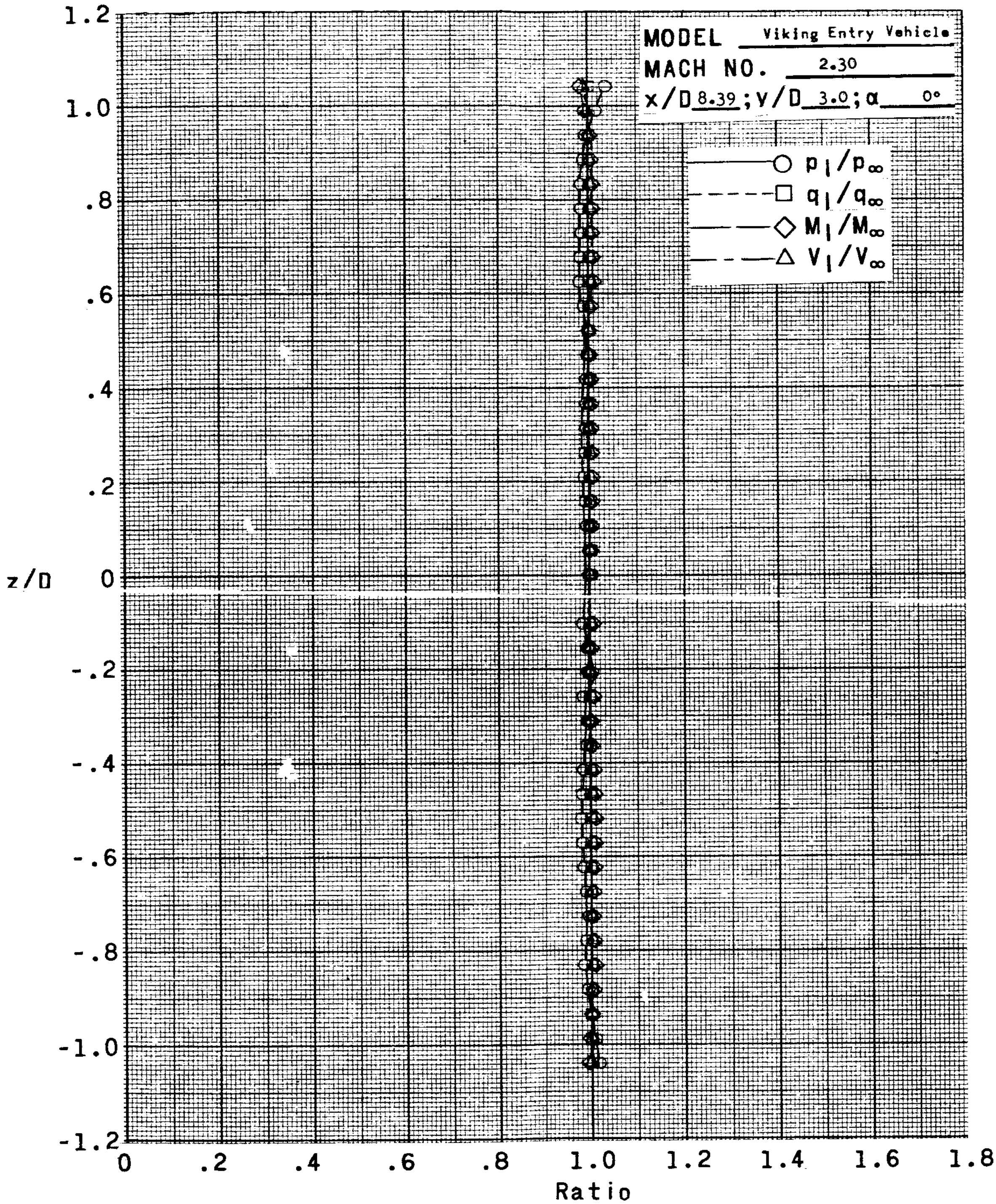
(aa) $x/D = 7.0$; $y/D = 0$; $\alpha = 0^{o}$.

Figure 6.- Continued.



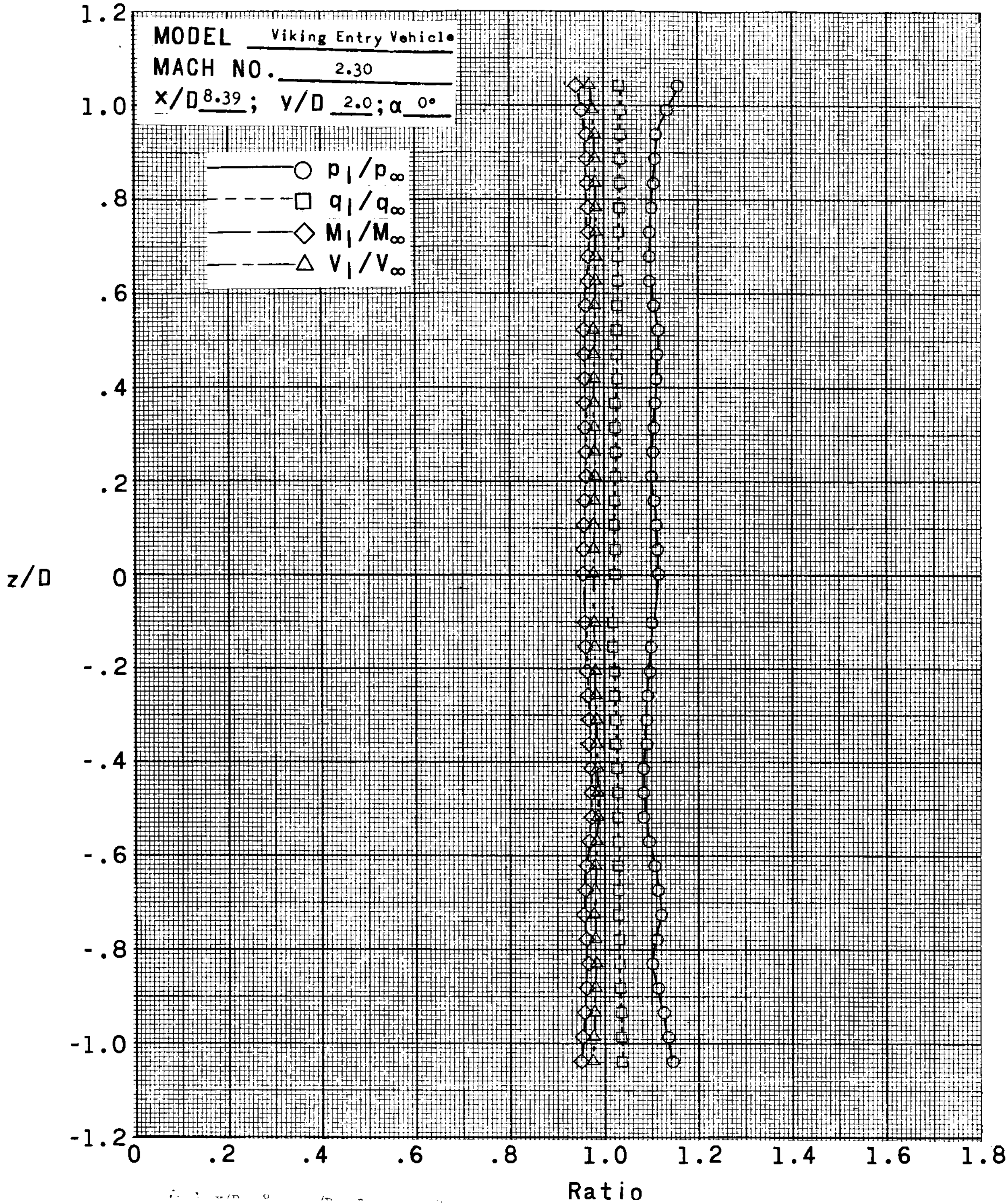
(bb) $x/D = 8.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 6.- Continued.



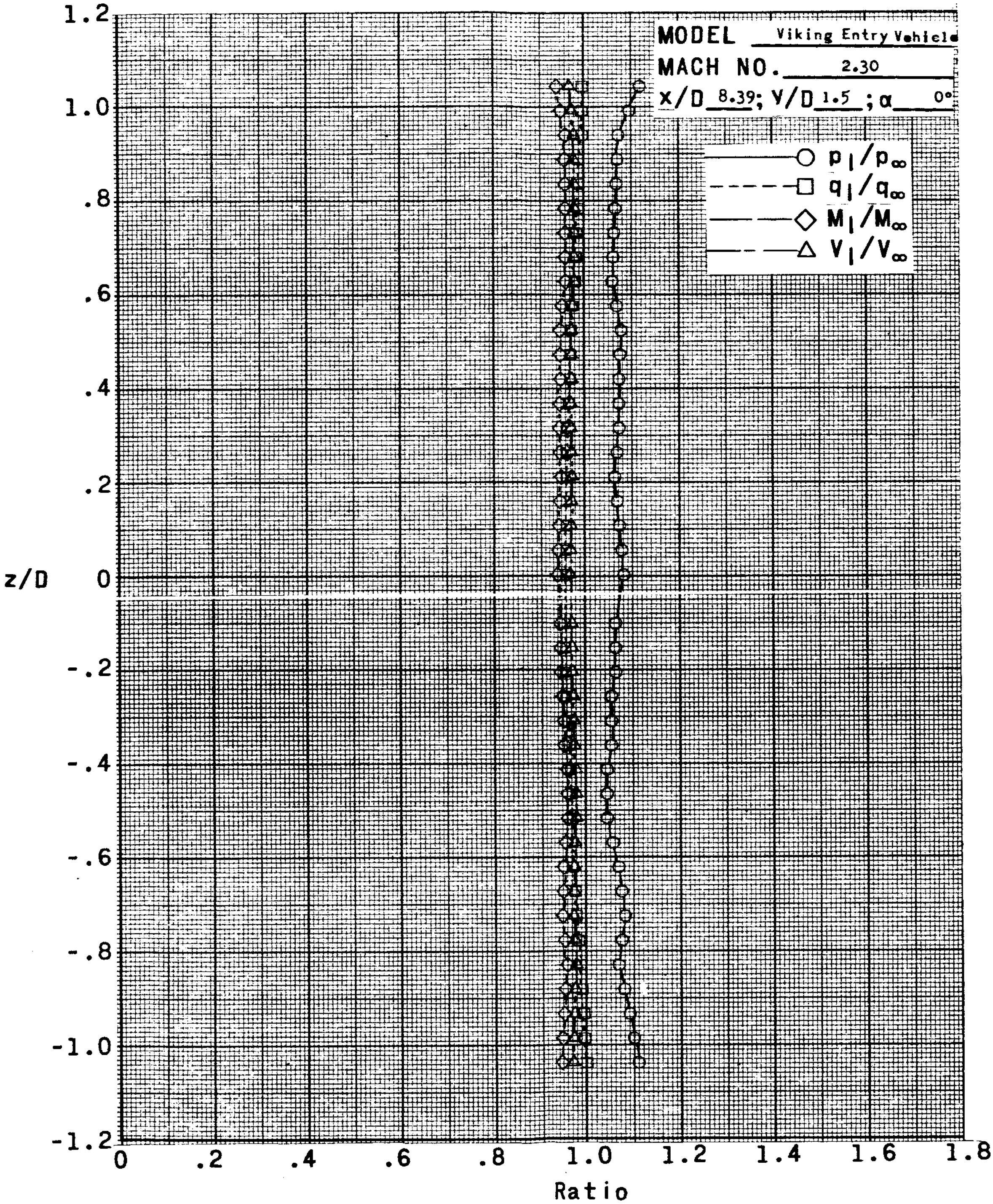
(cc) $x/D = 8.39$; $y/D = 3.0$; $\alpha = 0^0$.

Figure 6.- Continued.



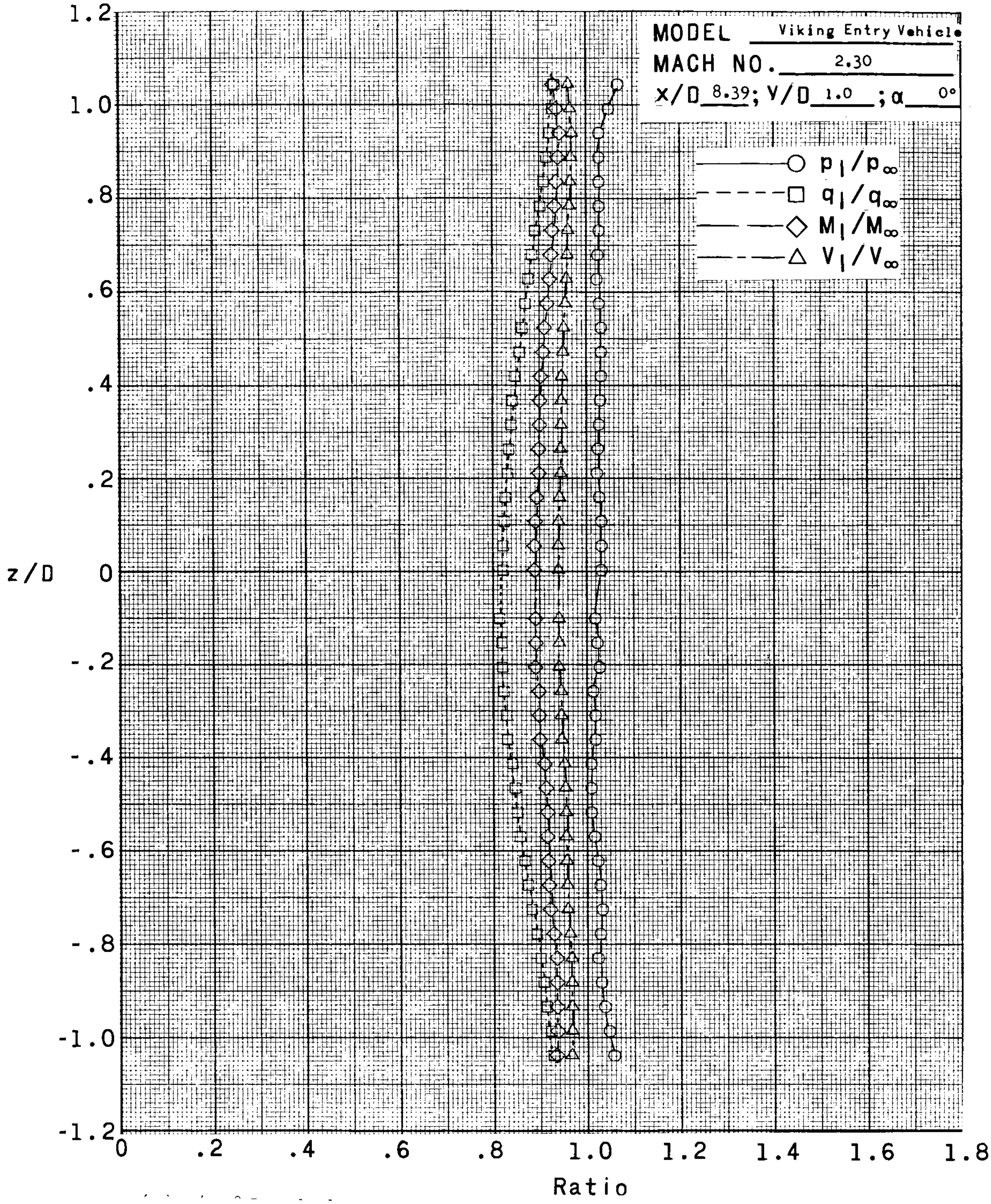
(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^0$.

Figure 6.- Continued.



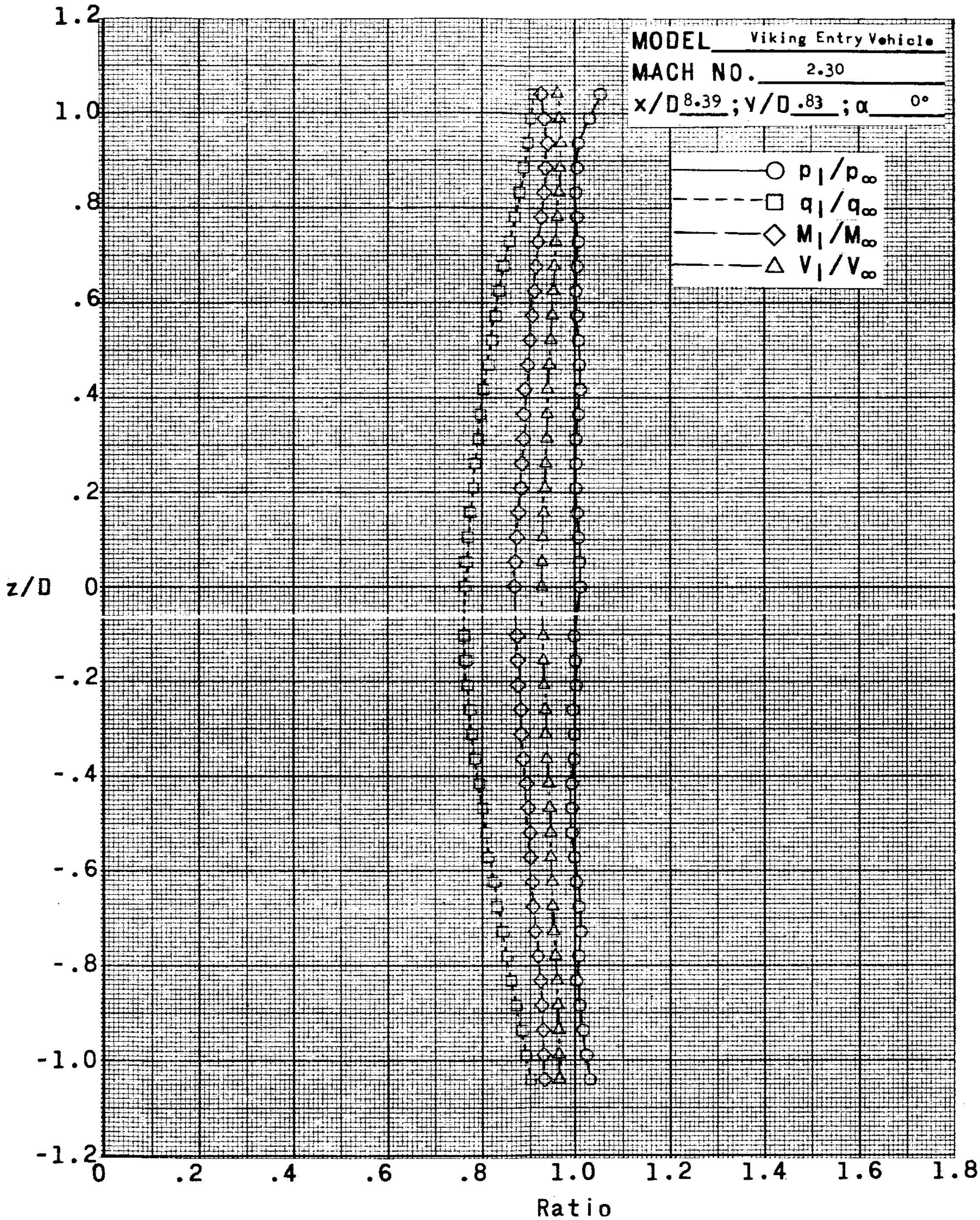
(ee) x/D = 8.39; y/D = 1.5; α = 0°.

Figure 6.- Continued.



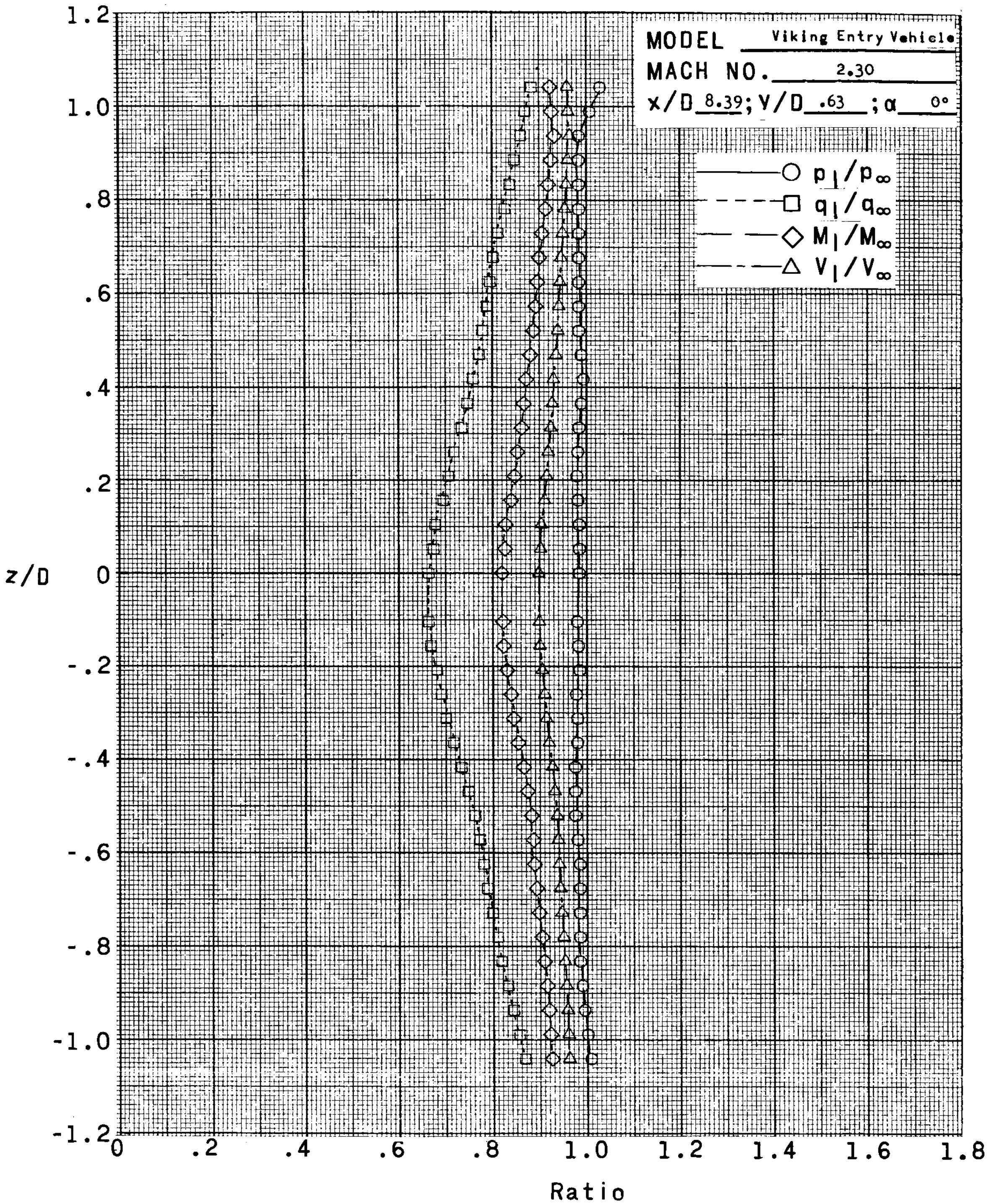
(ff) x/D = 8.39; y/D = 1.0; α = 0°.

Figure 6.- Continued.



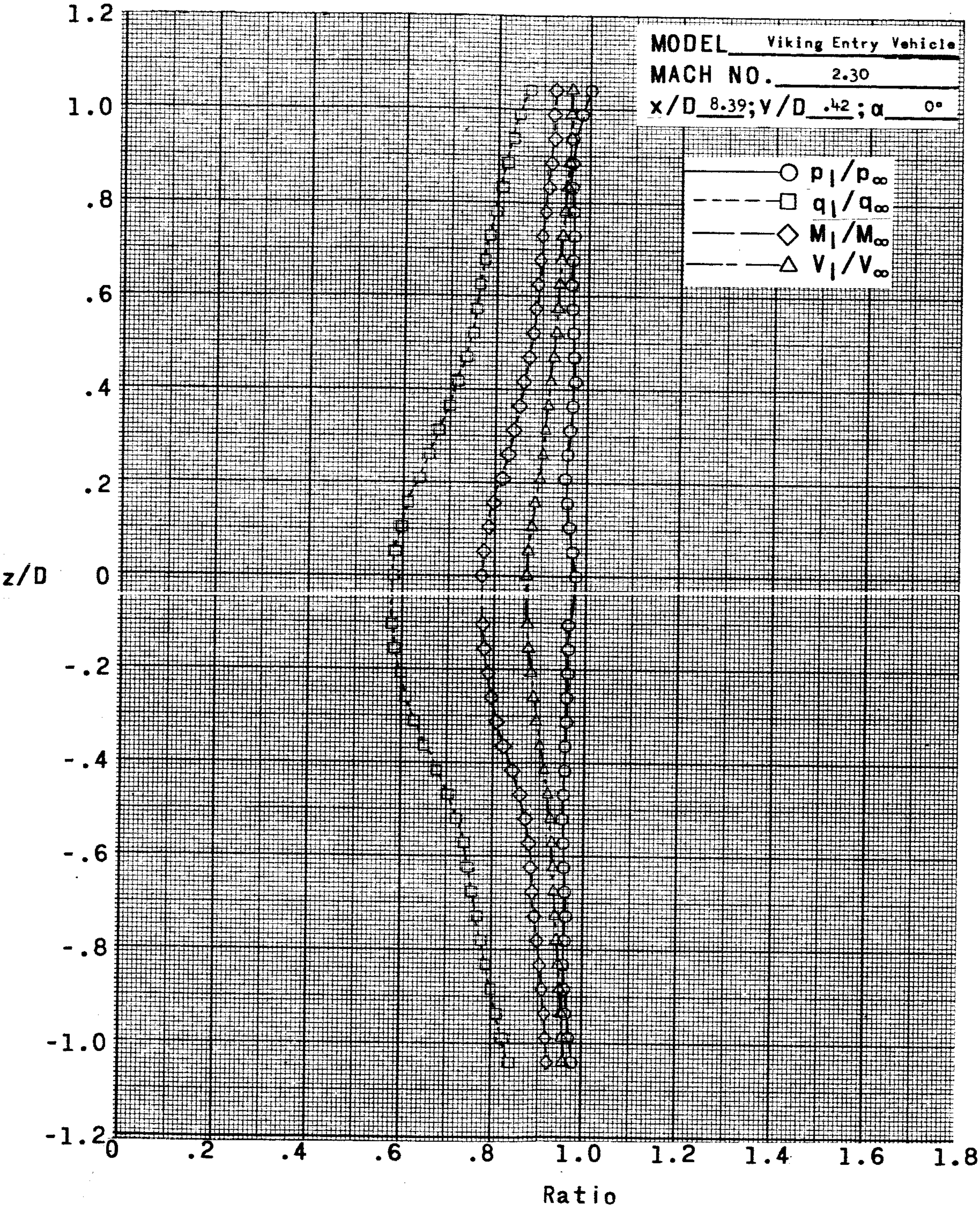
(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^0$.

Figure 6.- Continued.



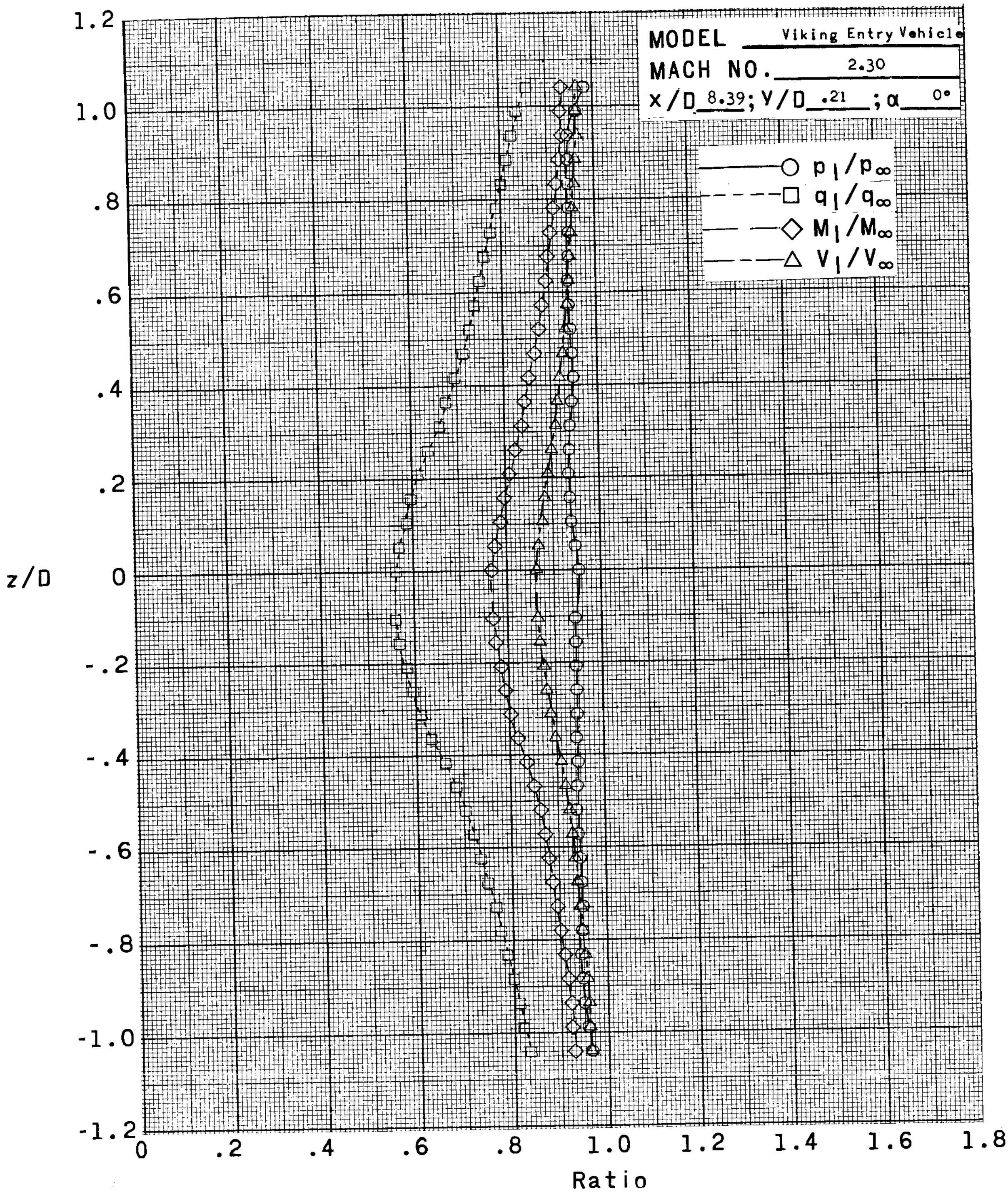
(hh) x/D = 8.39; y/D = 0.63; α = 0°.

Figure 6.- Continued.



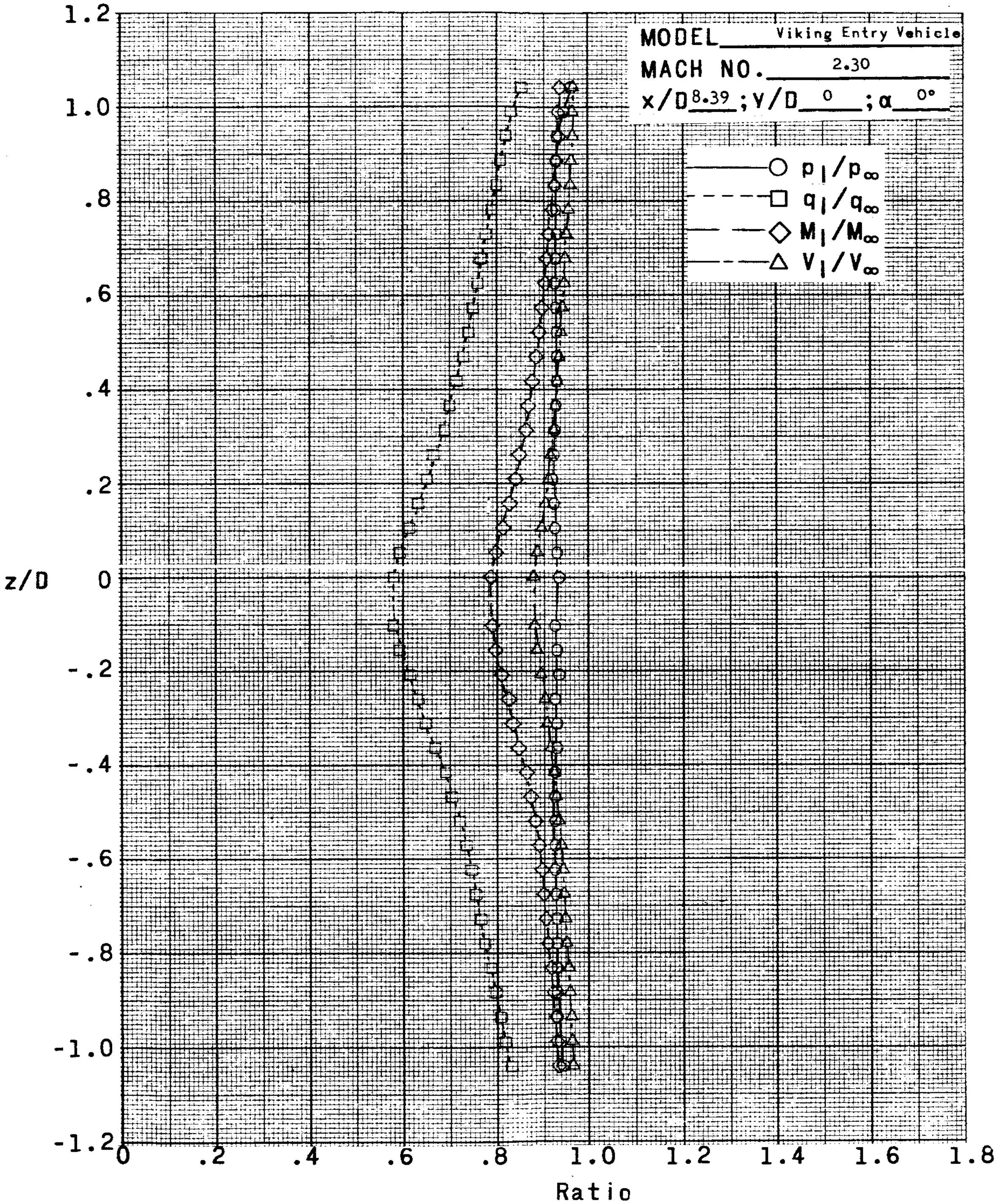
(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^0$.

Figure 6.- Continued.



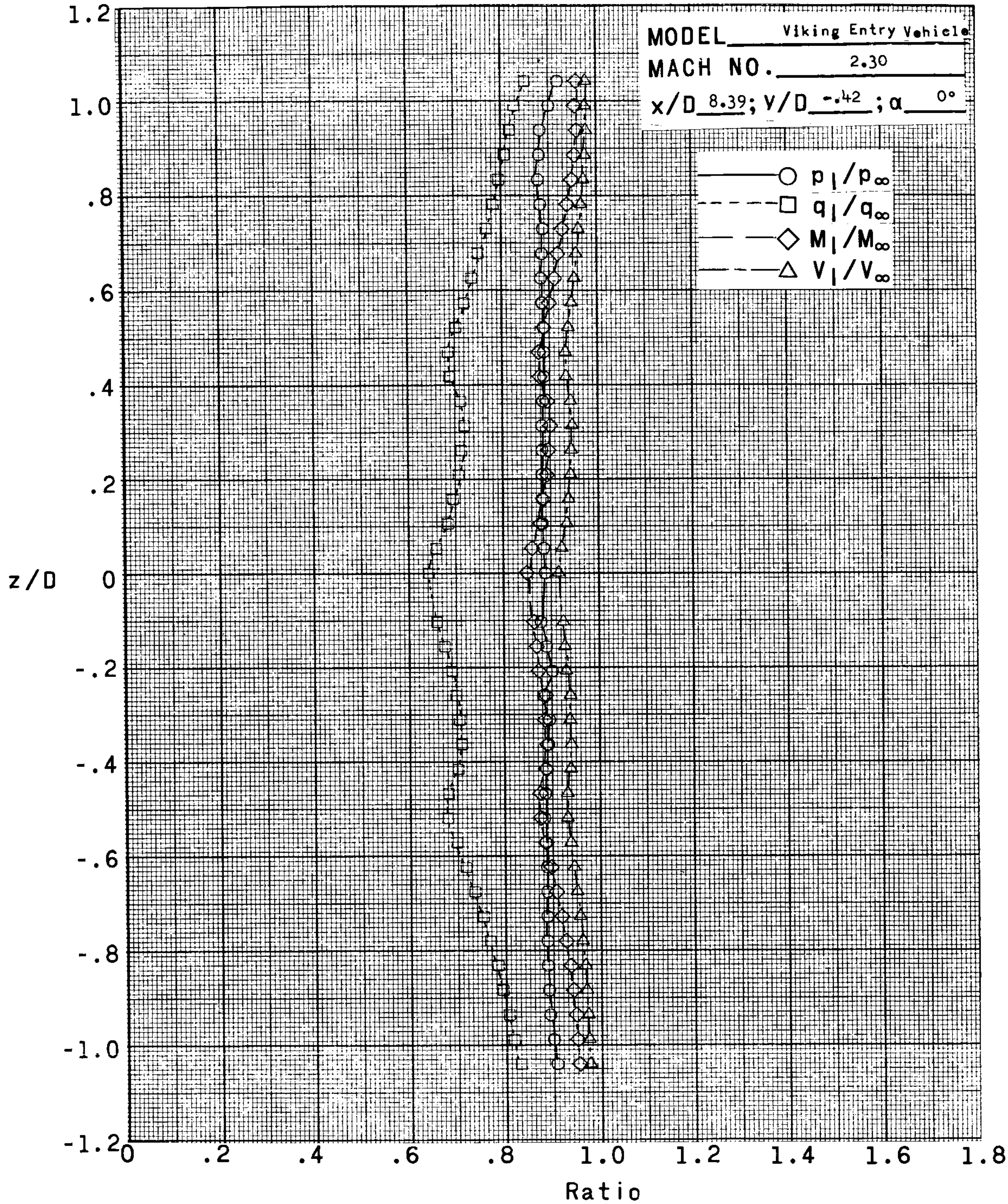
(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^0$.

Figure 6.- Continued.



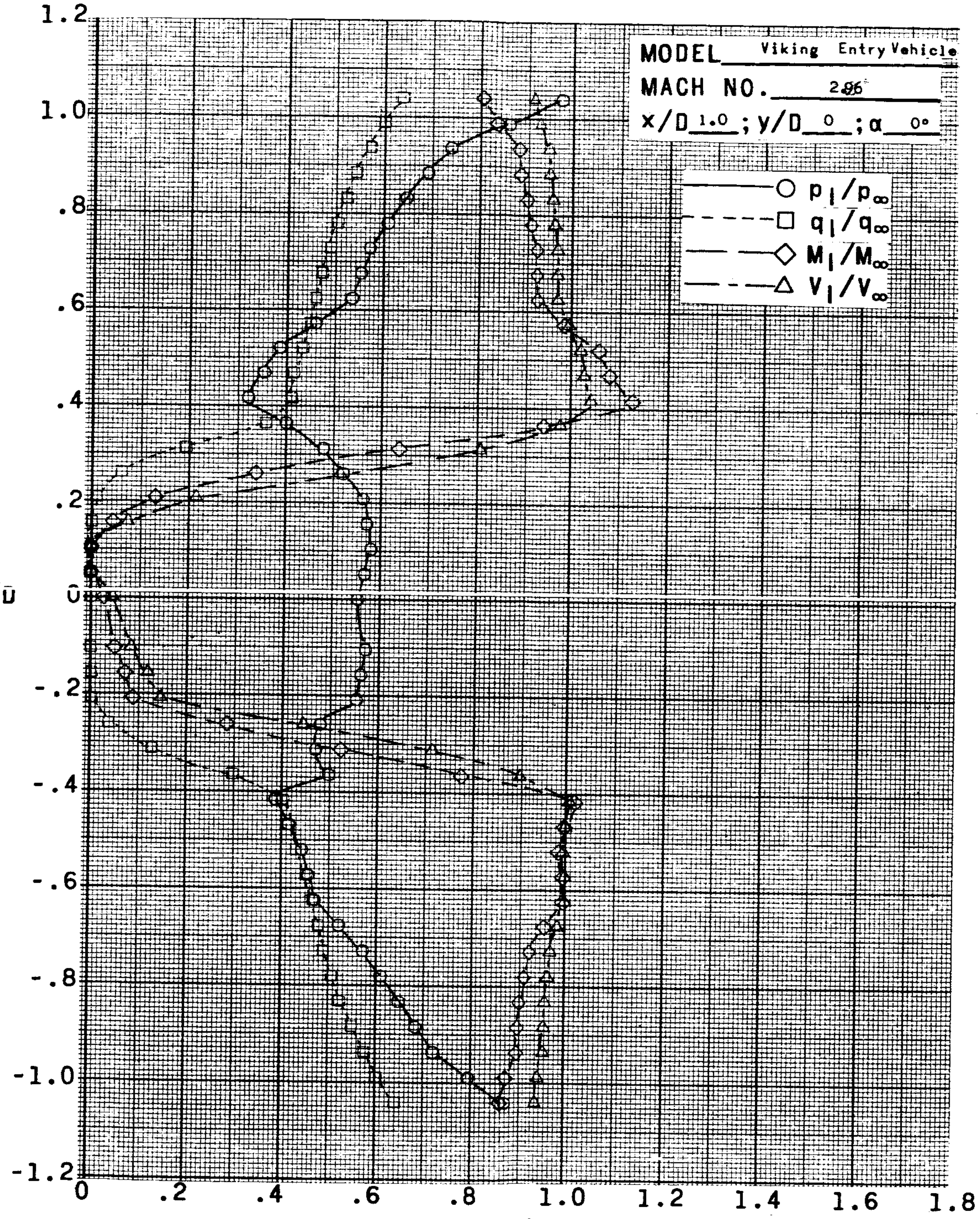
(kk) $x/D = 8.39$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 6.- Continued.



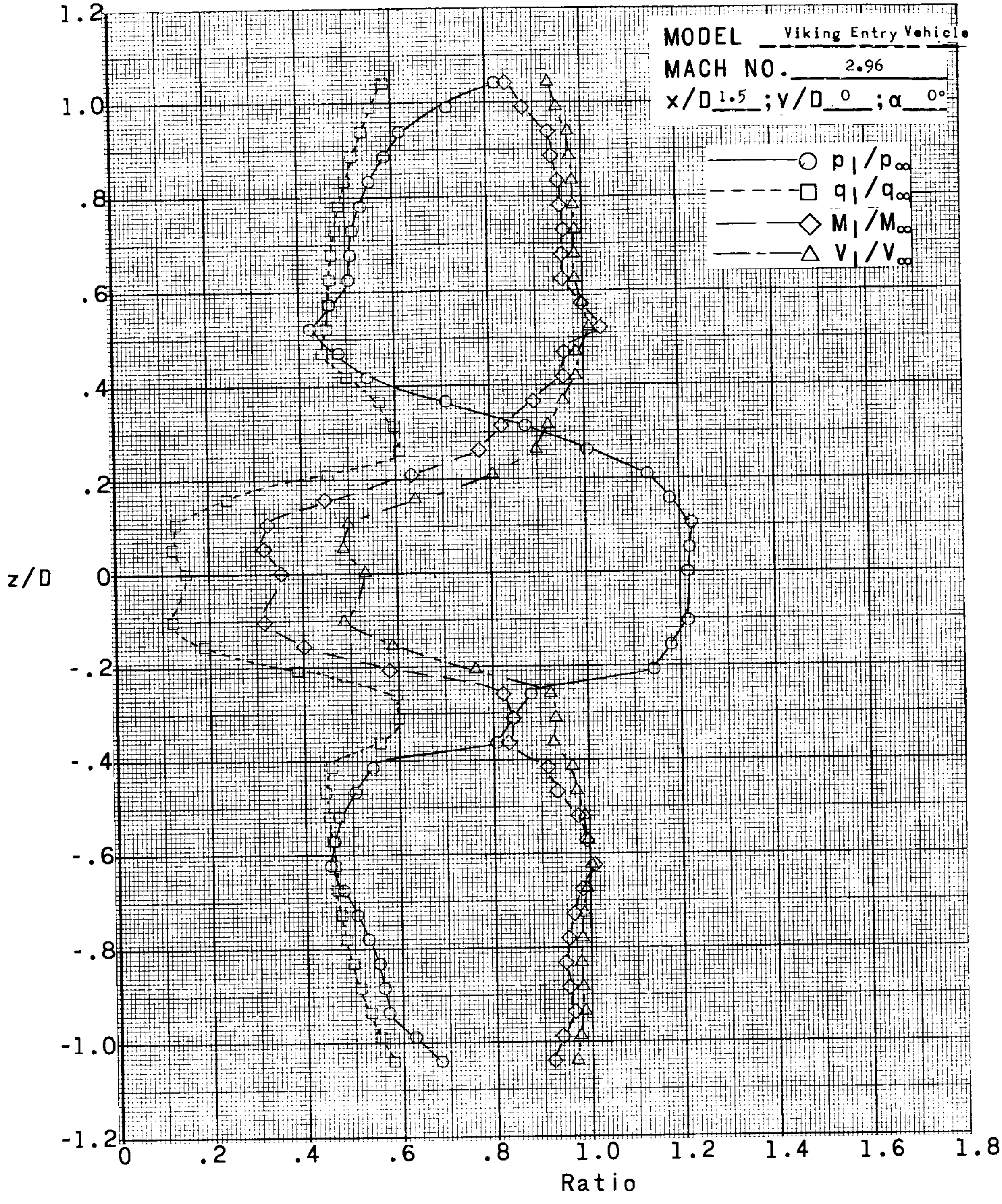
(II) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^{\circ}$.

Figure 6.- Concluded.



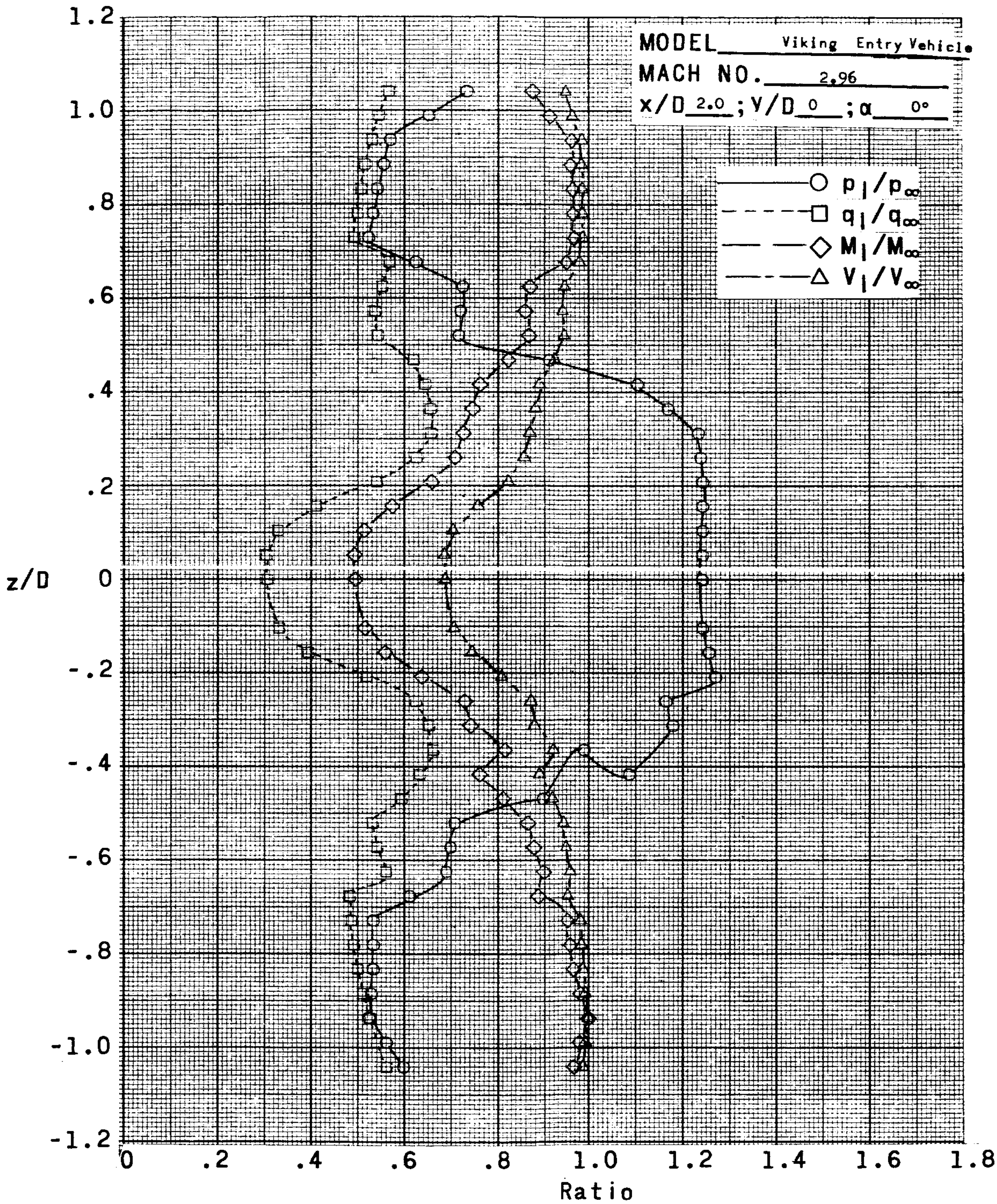
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 0^{\circ}$.

Figure 7.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D in the wake of the Viking Entry Vehicle at a Mach number of 2.96 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



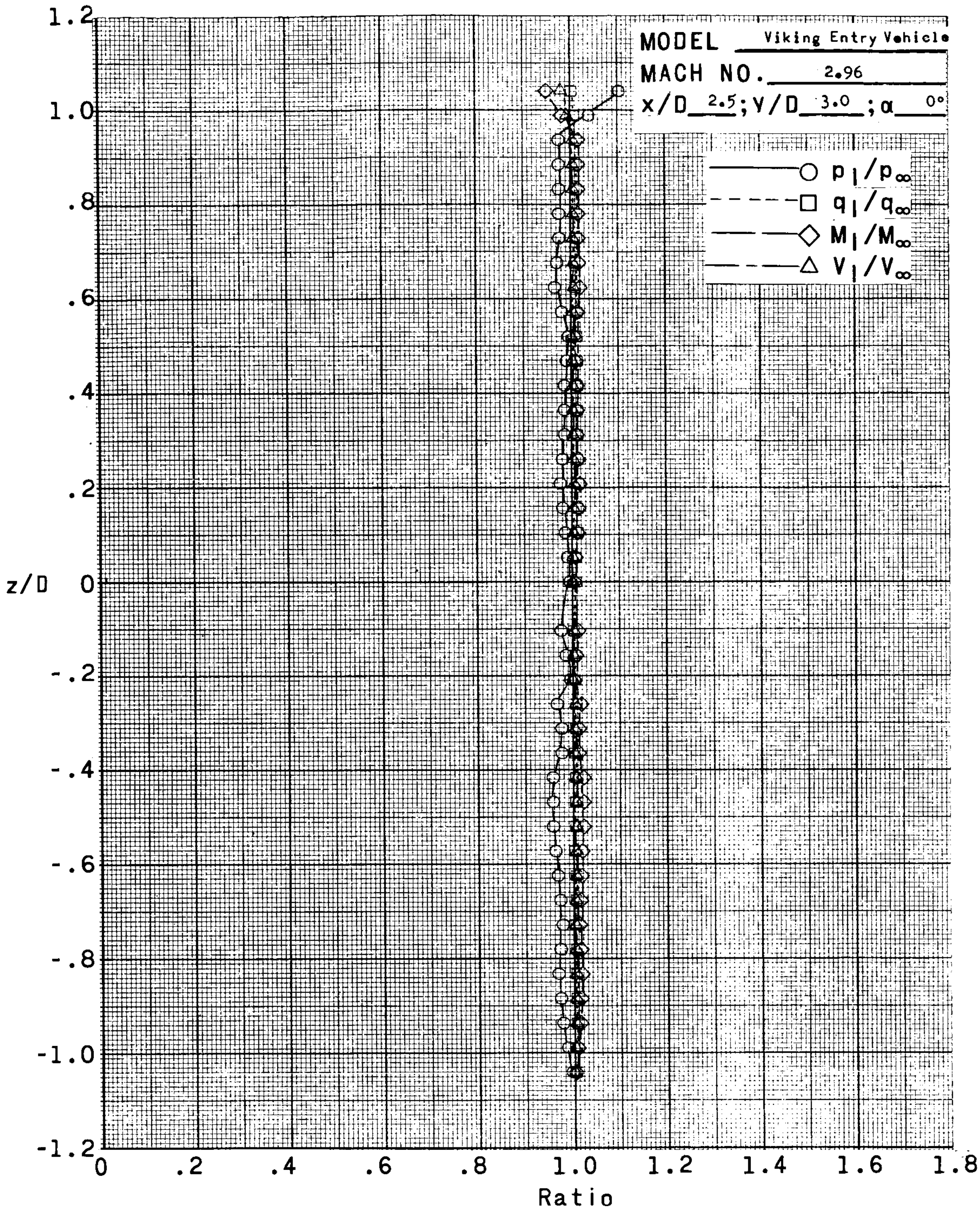
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 7.- Continued.



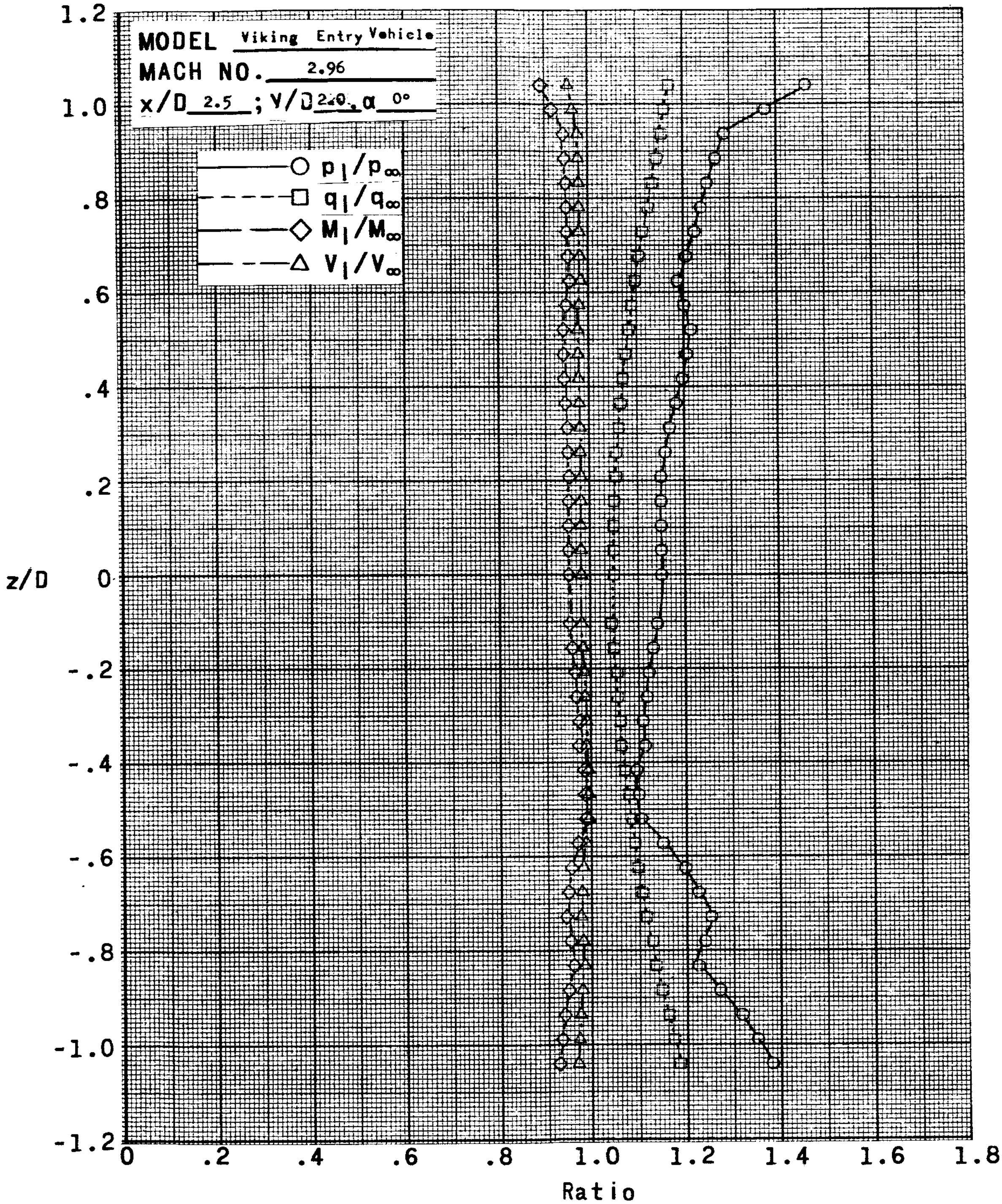
(c) x/D = 2.0; y/D = 0; α = 0°.

Figure 7.- Continued.



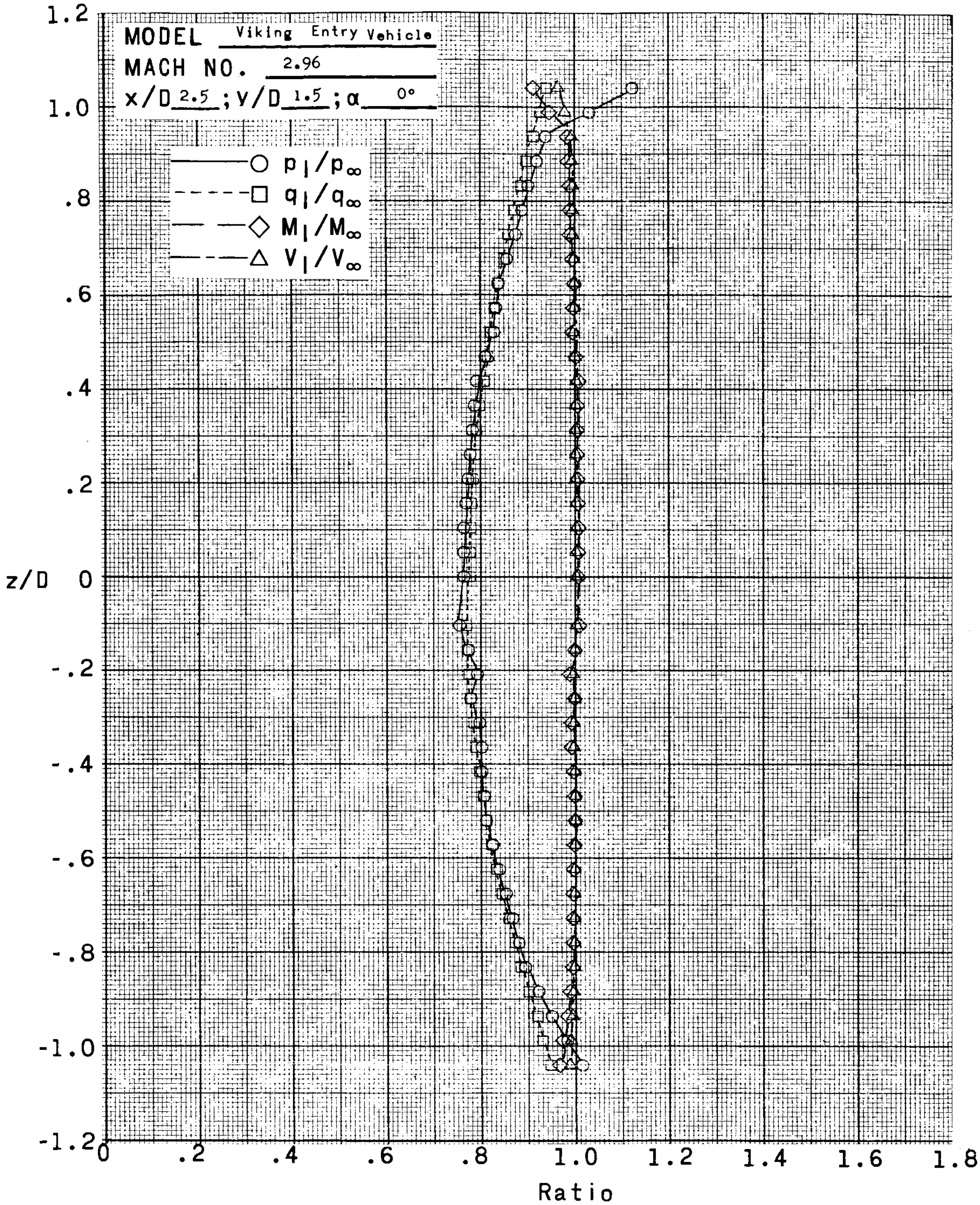
(d) $x/D = 2.5$; $y/D = 3.0$; $\alpha = 0^{0}$.

Figure 7.- Continued.



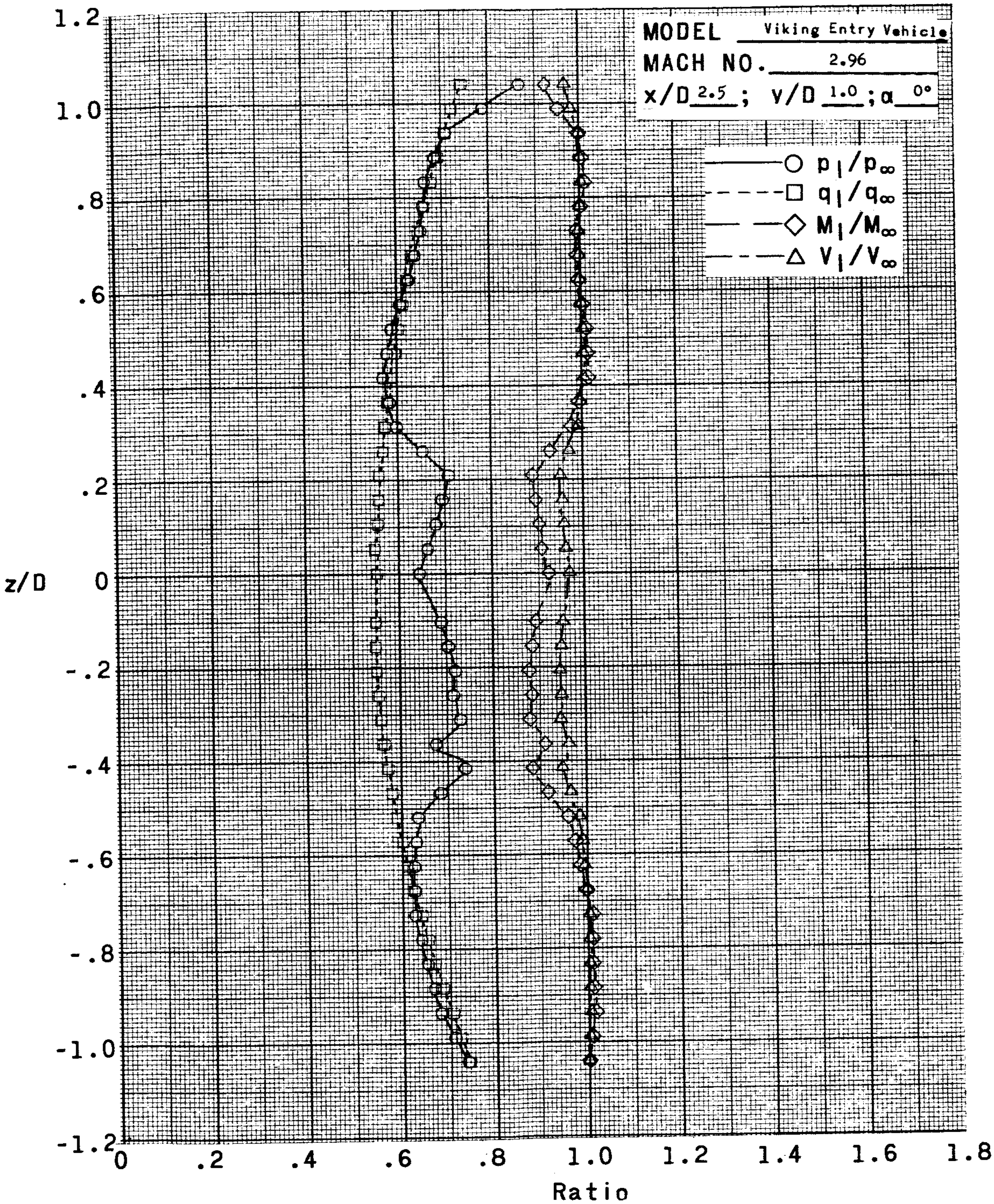
(e) $x/D = 2.5$; $y/D = 2.0$; $\alpha = 0^{0}$.

Figure 7.- Continued.



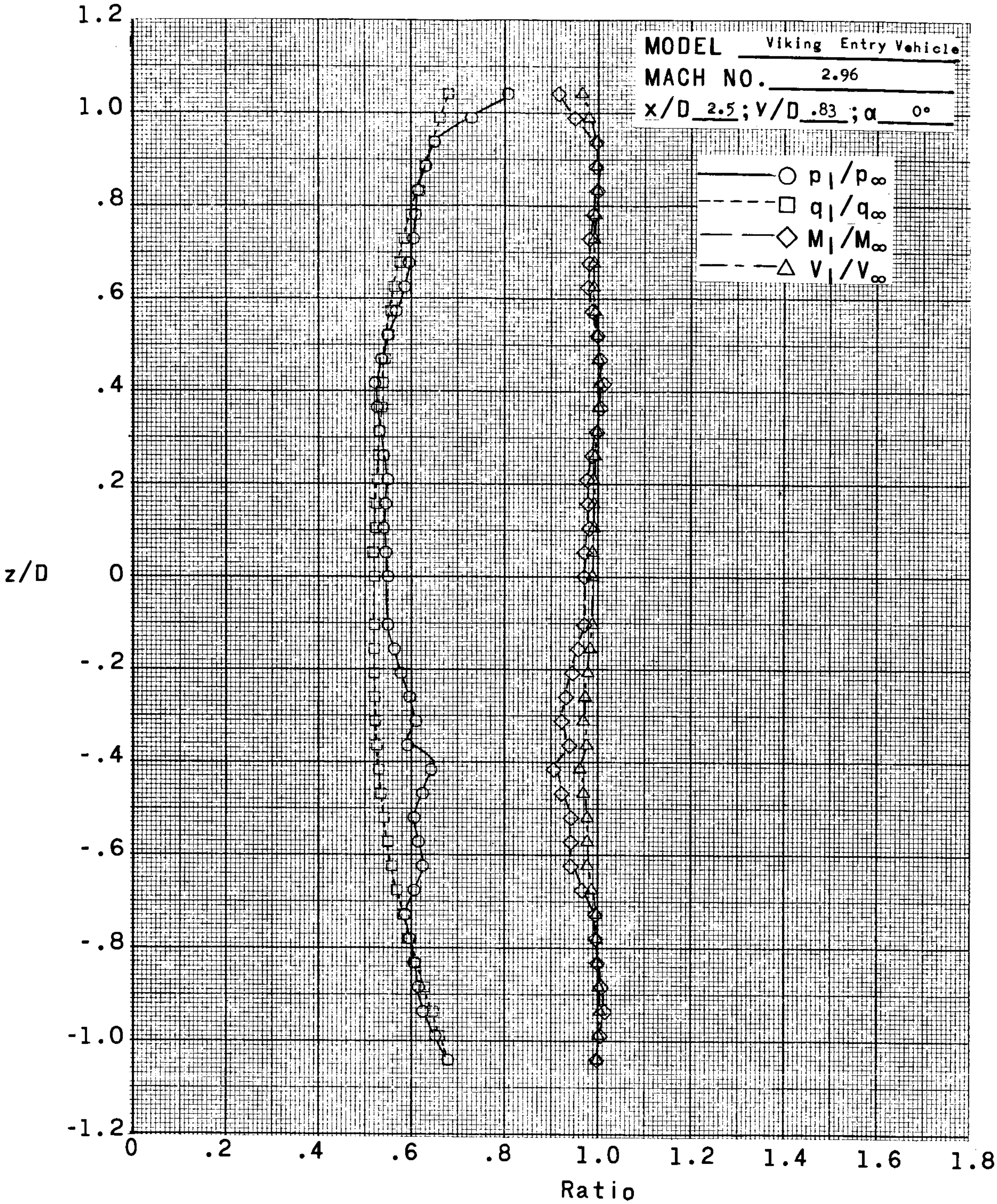
(f) $x/D = 2.5$; $y/D = 1.5$; $\alpha = 0^0$.

Figure 7.- Continued.



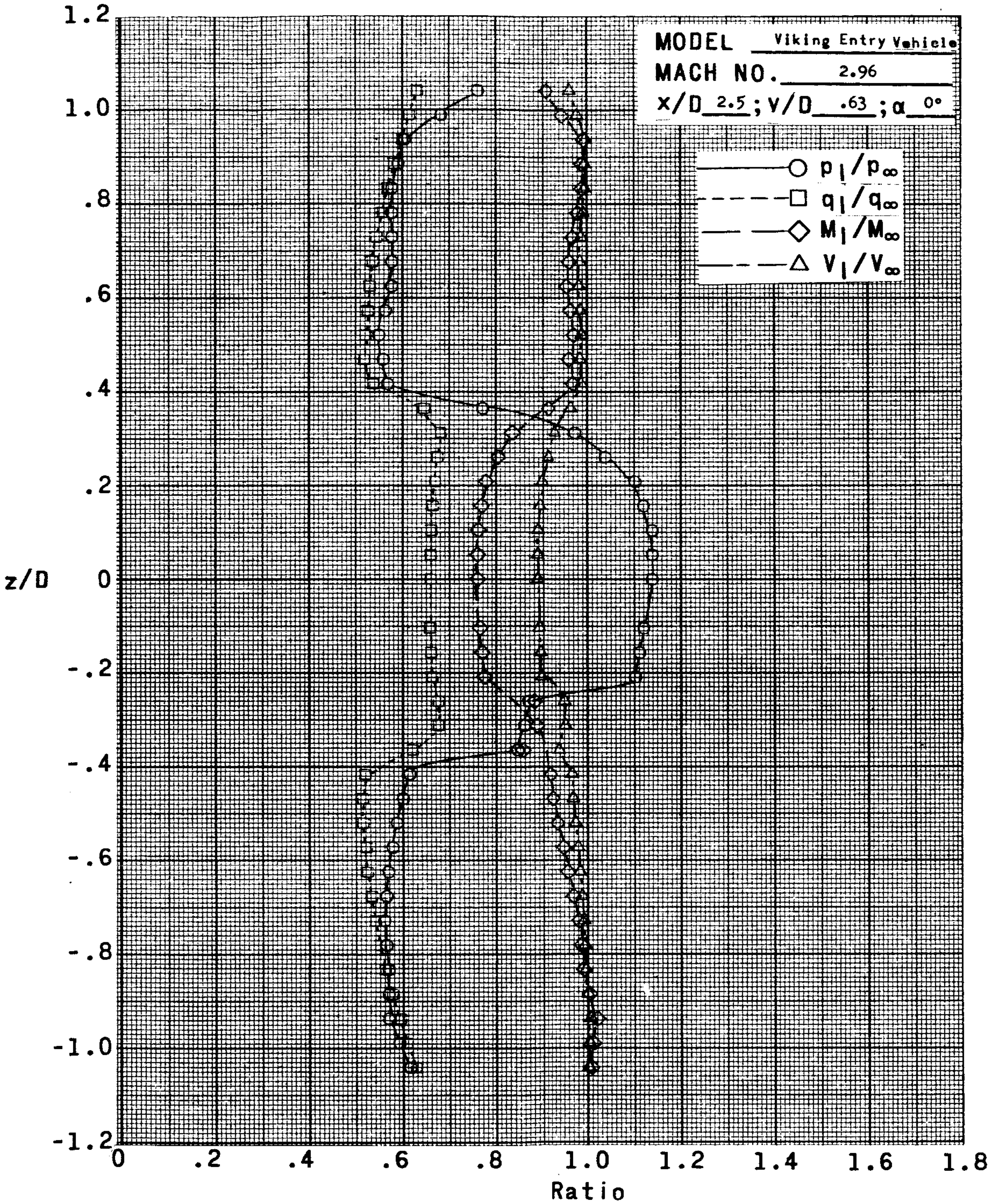
(g) x/D = 2.5; y/D = 1.0; α = 0°.

Figure 7.- Continued.



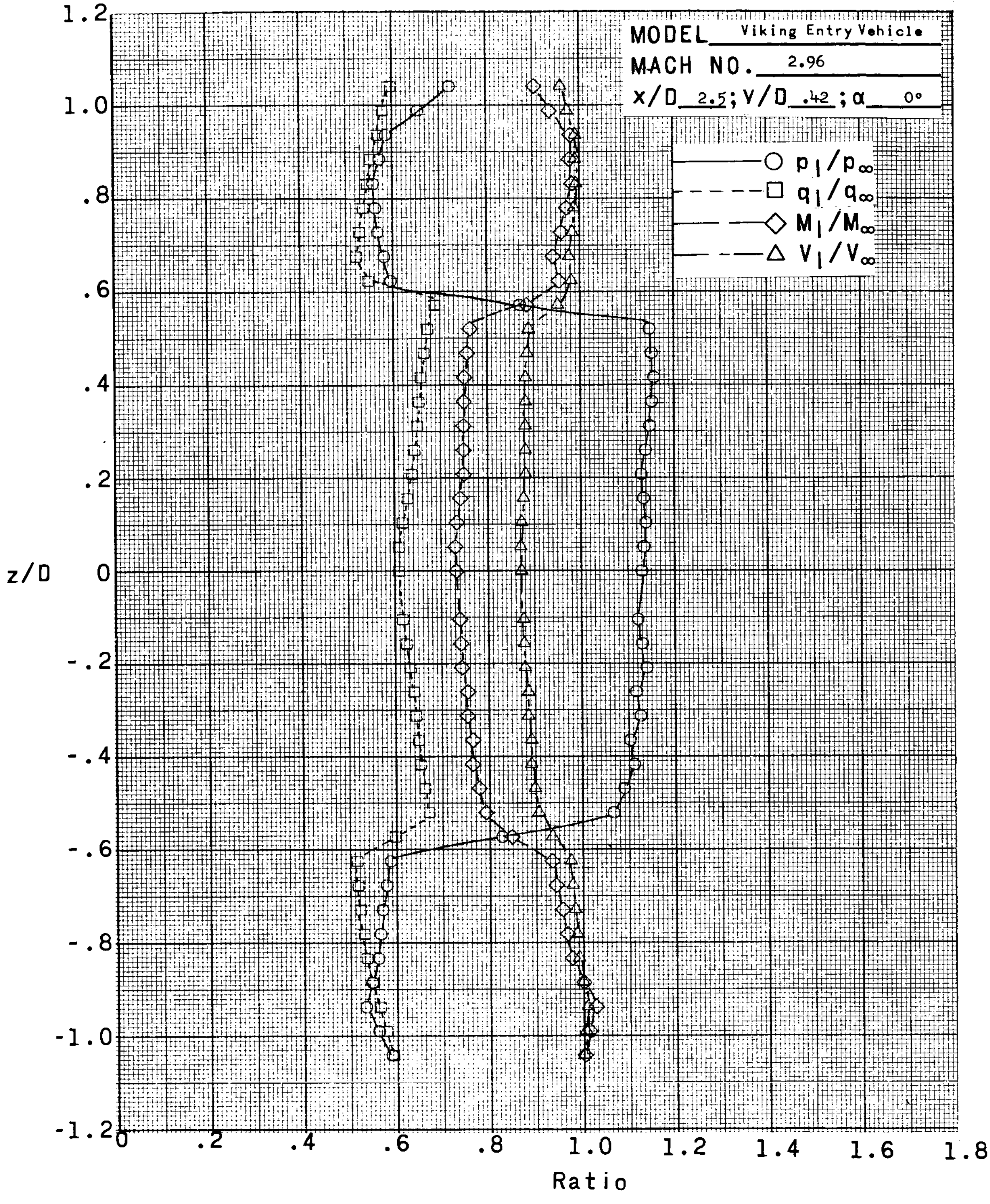
(h) x/D = 2.5; y/D = 0.83; α = 0°.

Figure 7.- Continued.



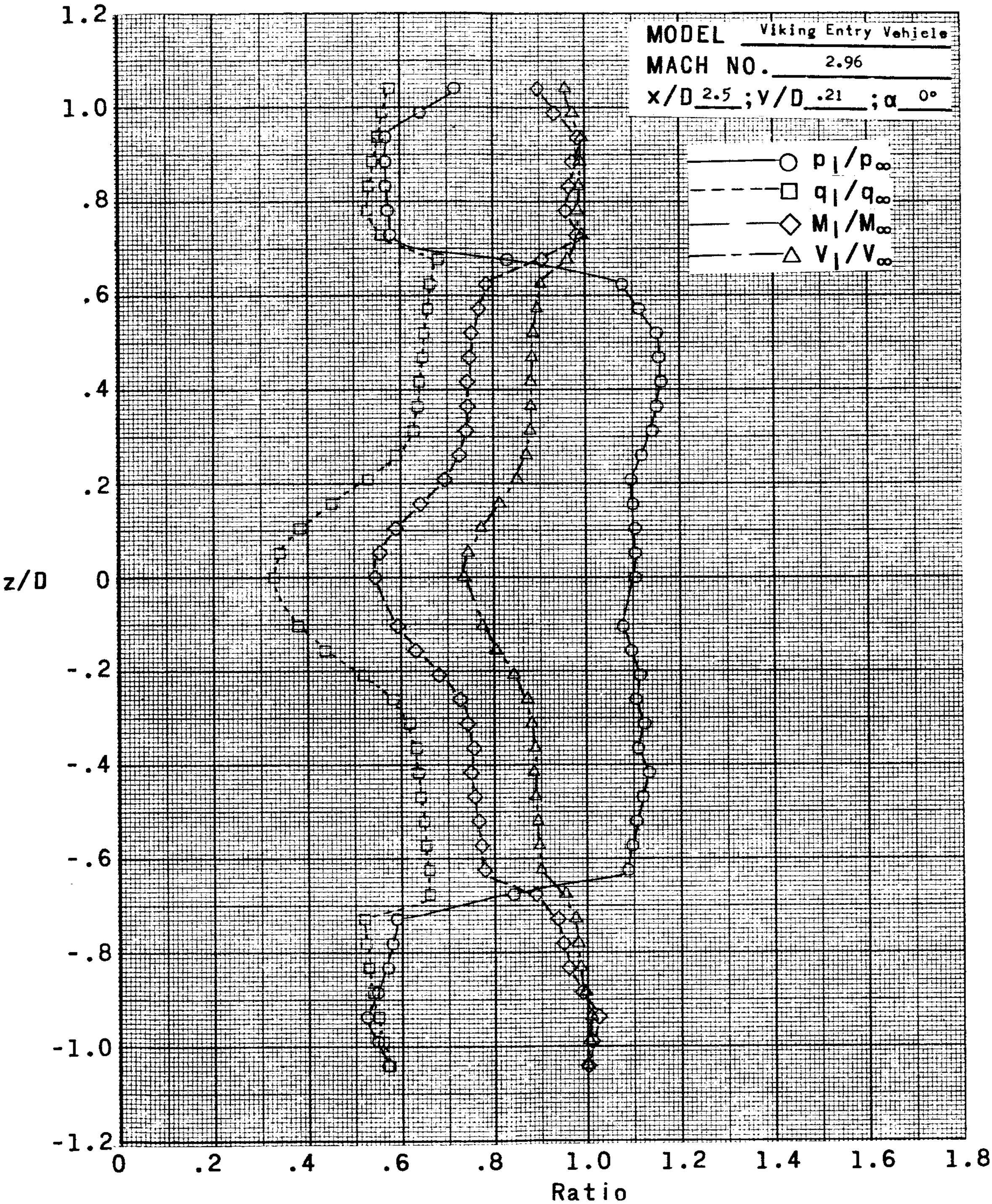
(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^{0}$.

Figure 7.- Continued.



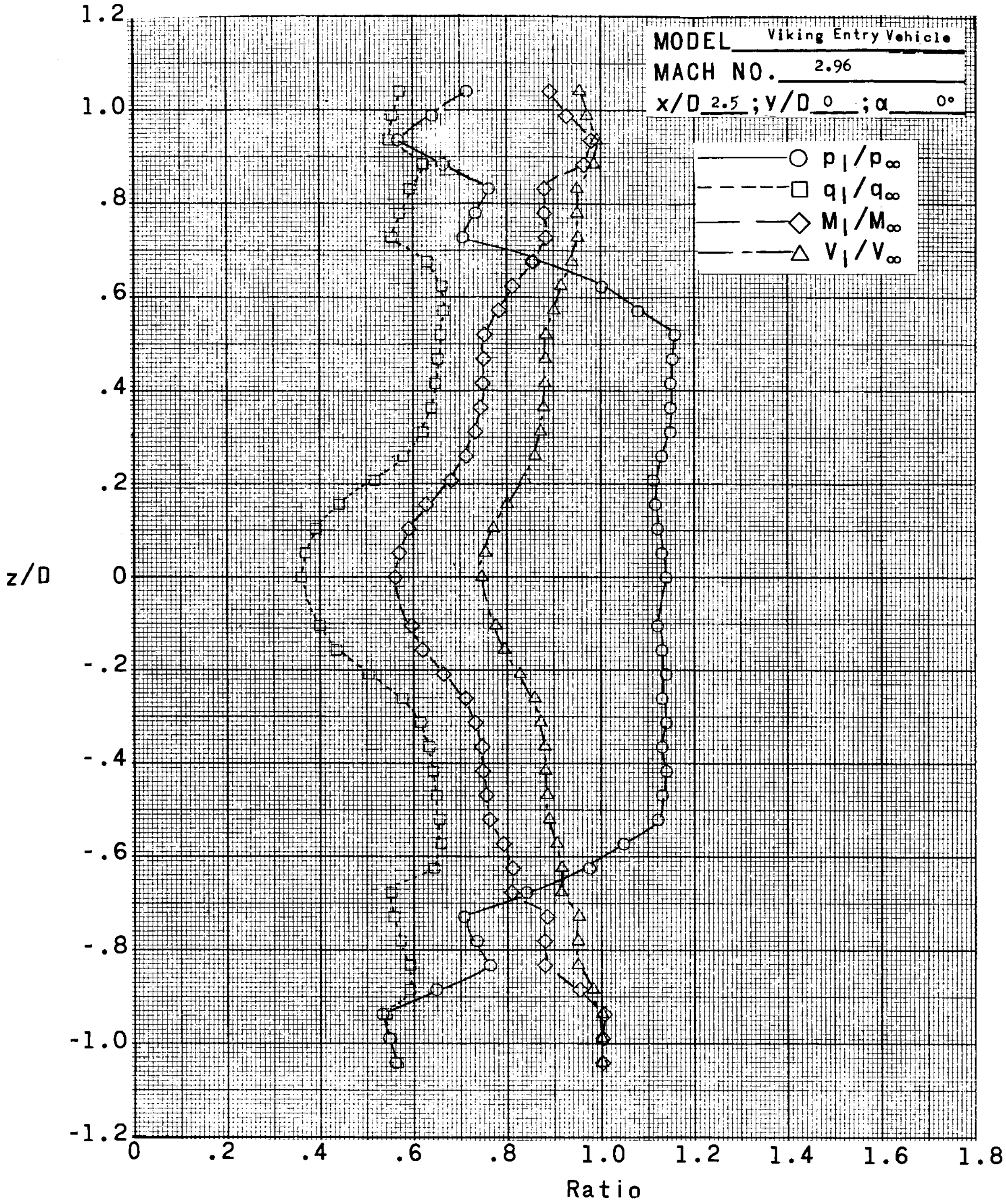
(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^{\circ}$.

Figure 7.- Continued.



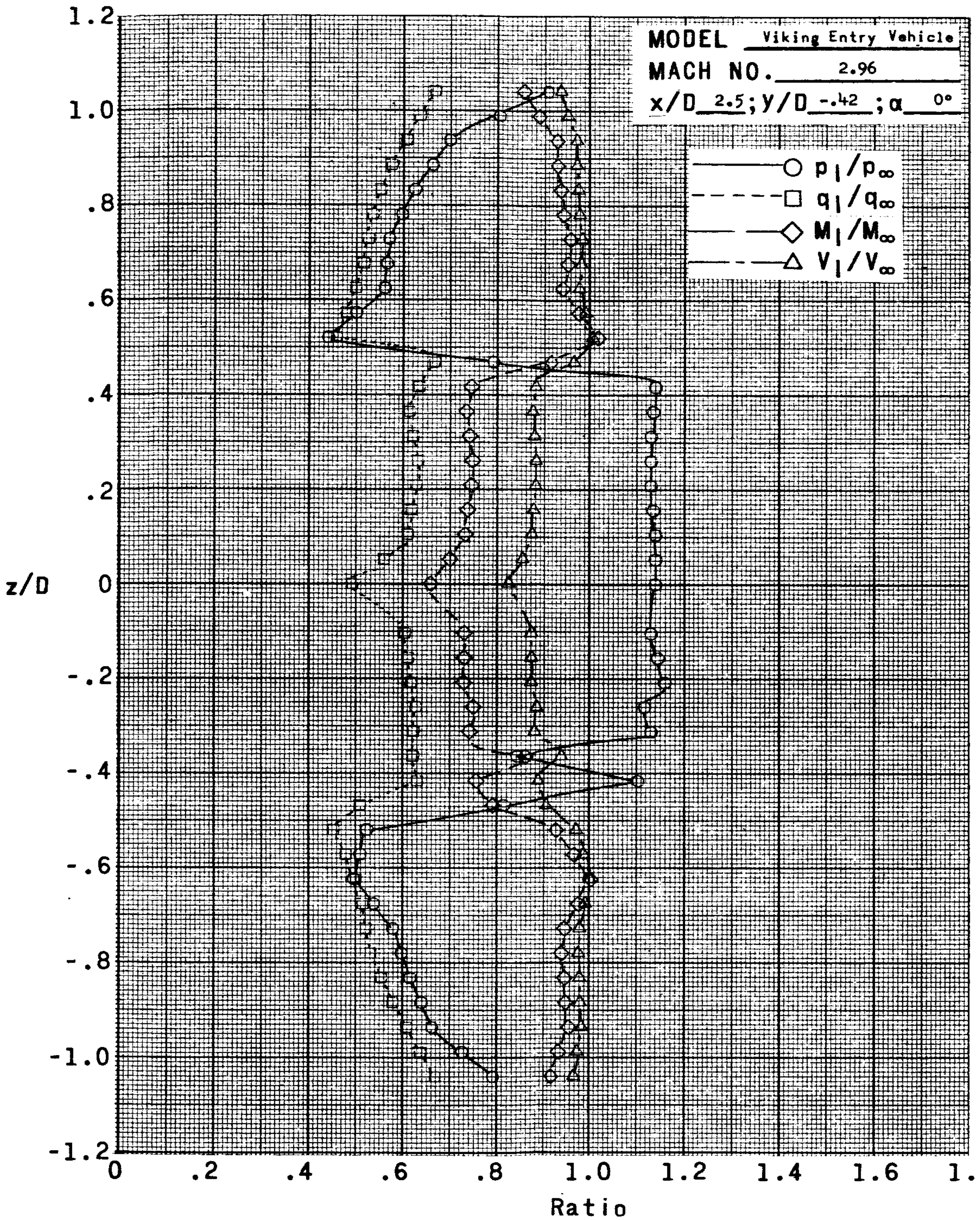
(k) x/D = 2.5; y/D = 0.21; α = 0°.

Figure 7.- Continued.



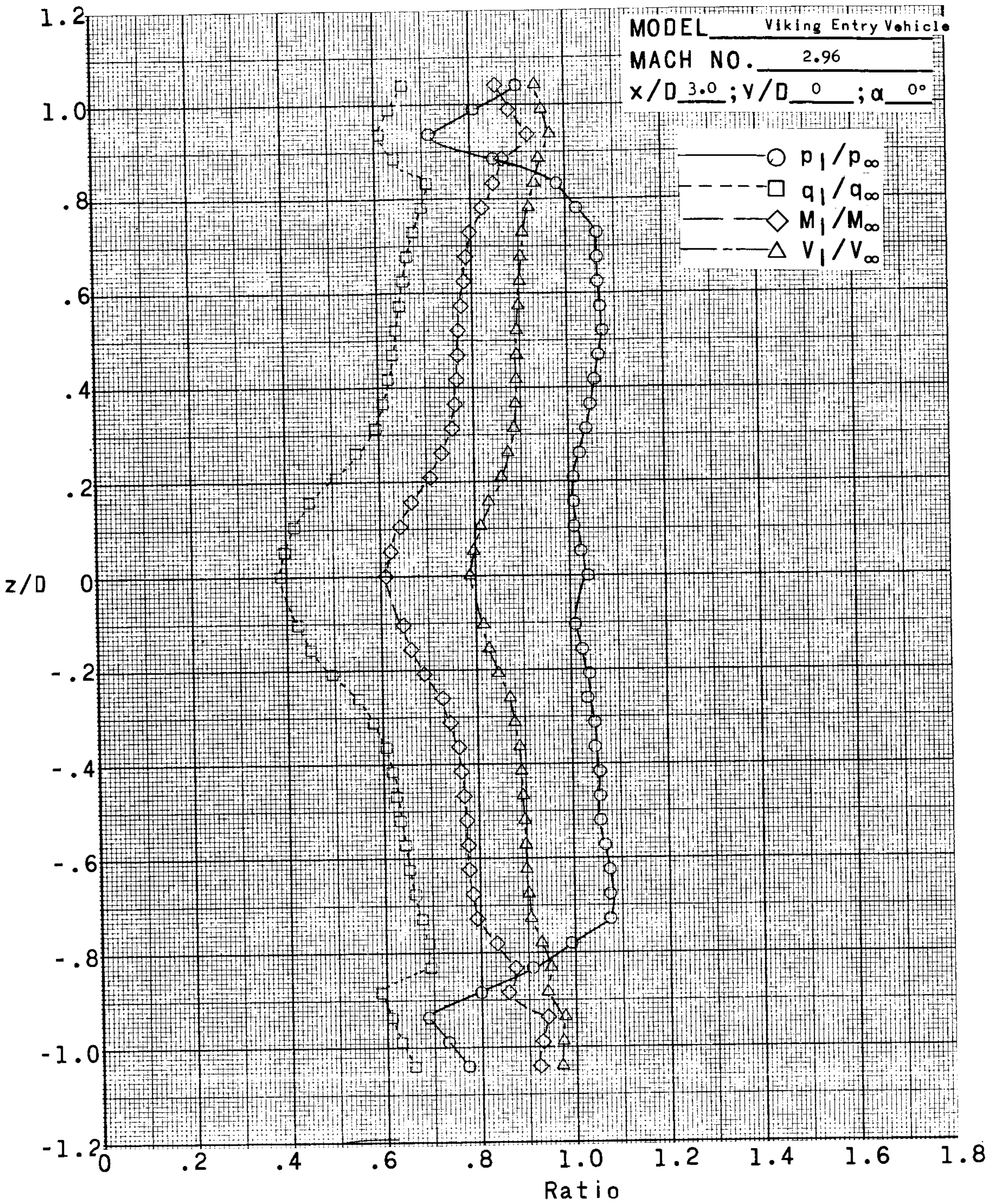
(l) x/D = 2.5; y/D = 0; α = 0°.

Figure 7.- Continued.



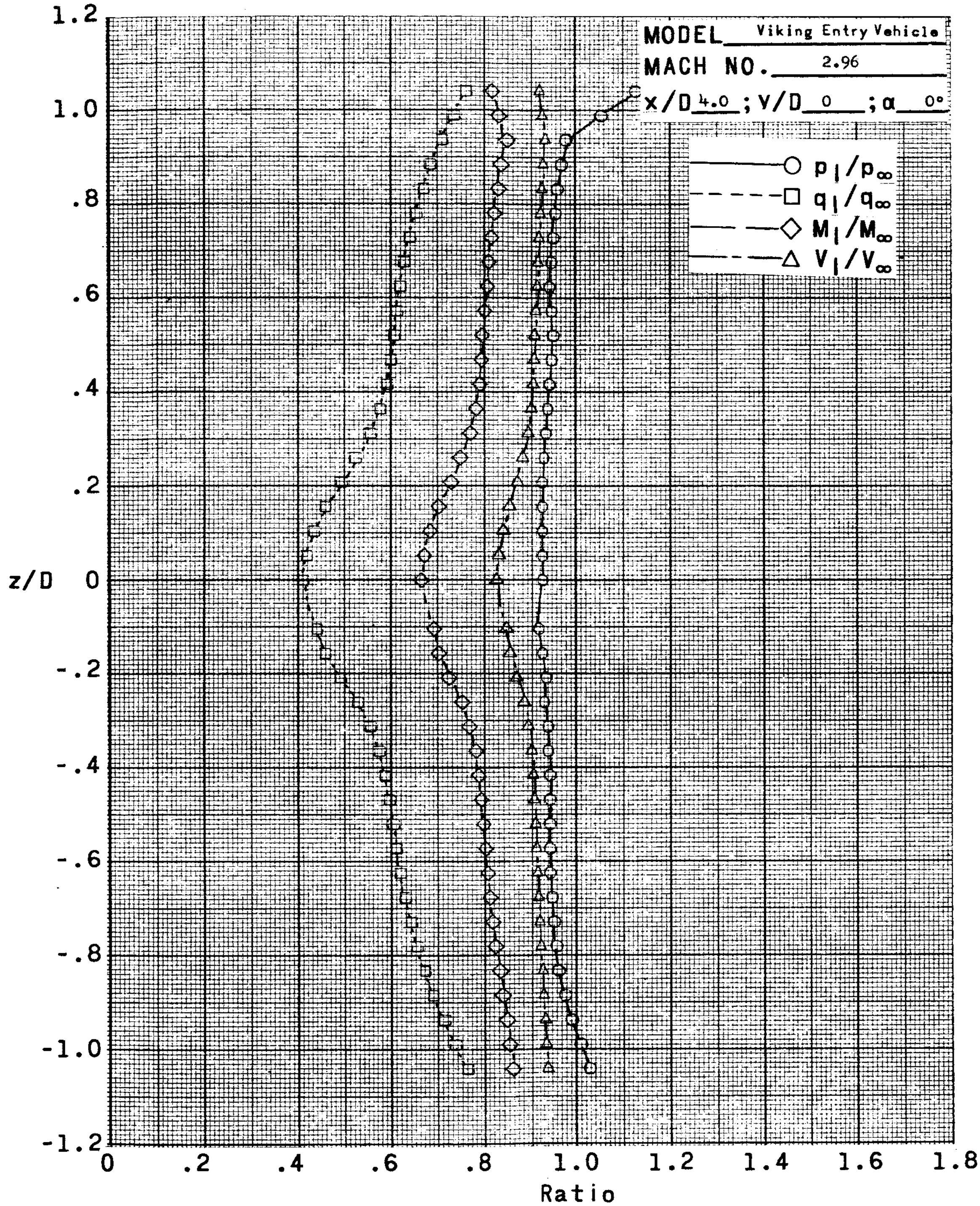
(m) x/D = 2.5; y/D = -0.42; α = 0^0.

Figure 7.- Continued.



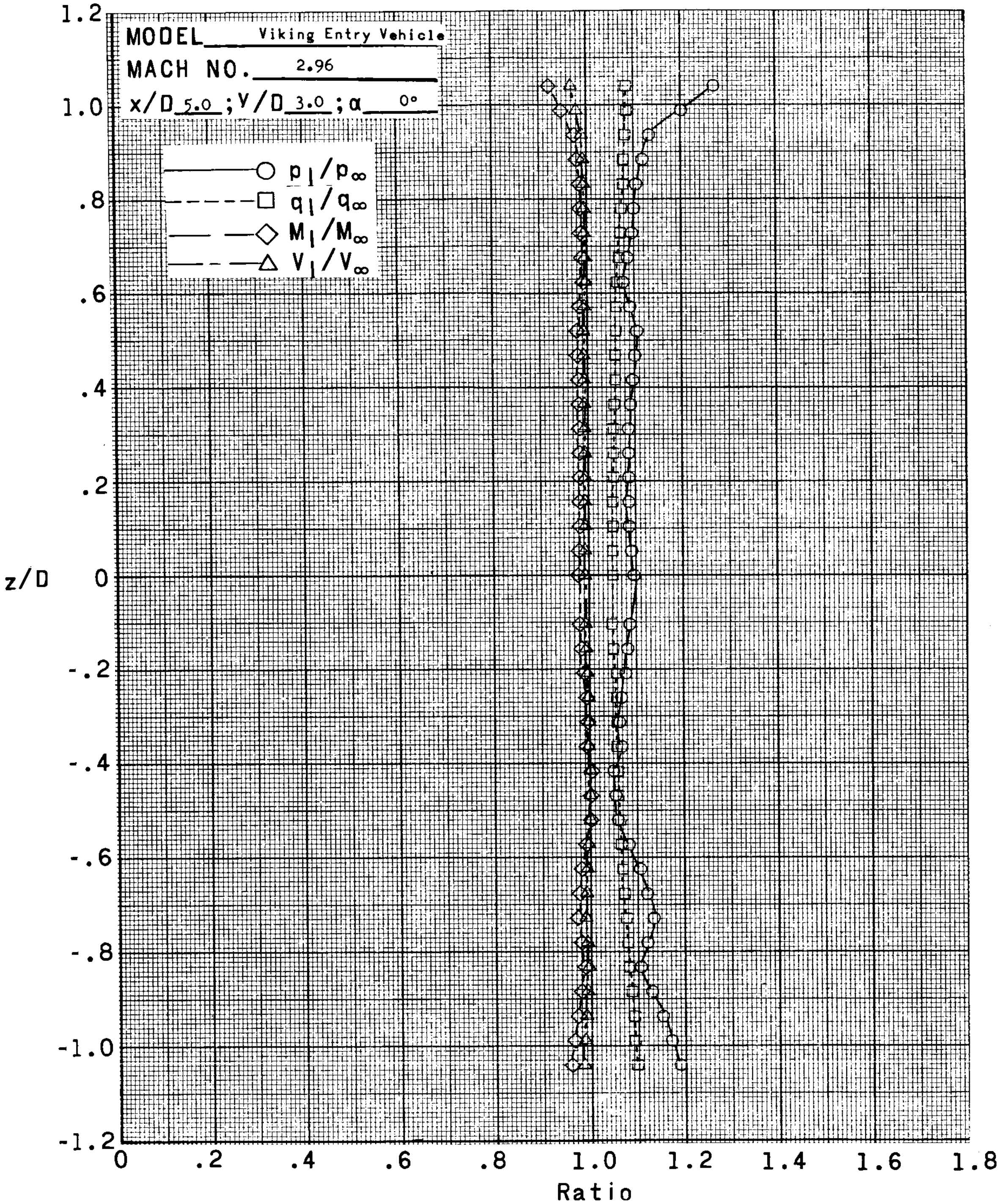
(n) x/D = 3.0; y/D = 0; α = 0°.

Figure 7.- Continued.



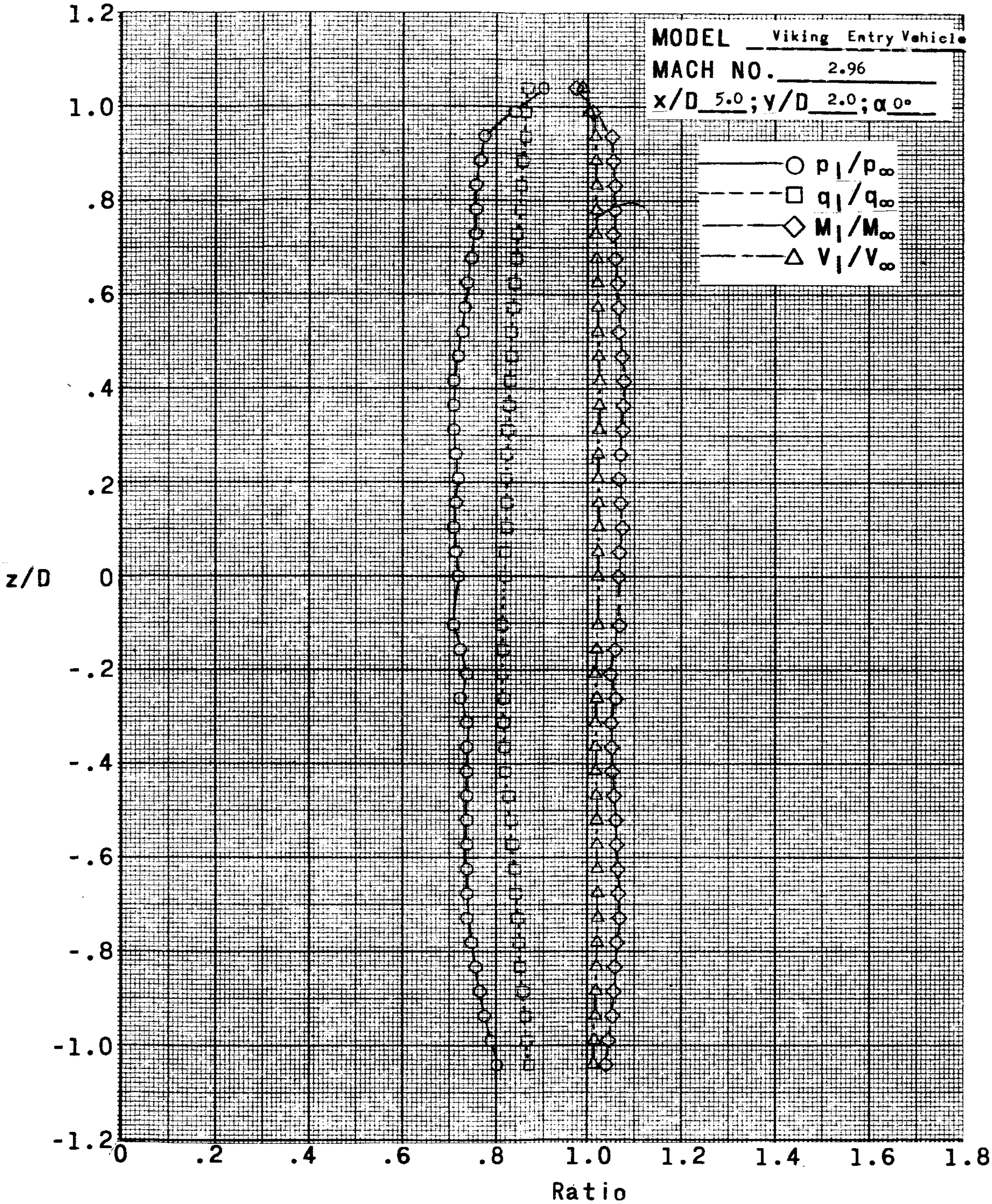
(o) $x/D = 4.0$; $y/D = 0$; $\alpha = 0^{0}$.

Figure 7.- Continued.



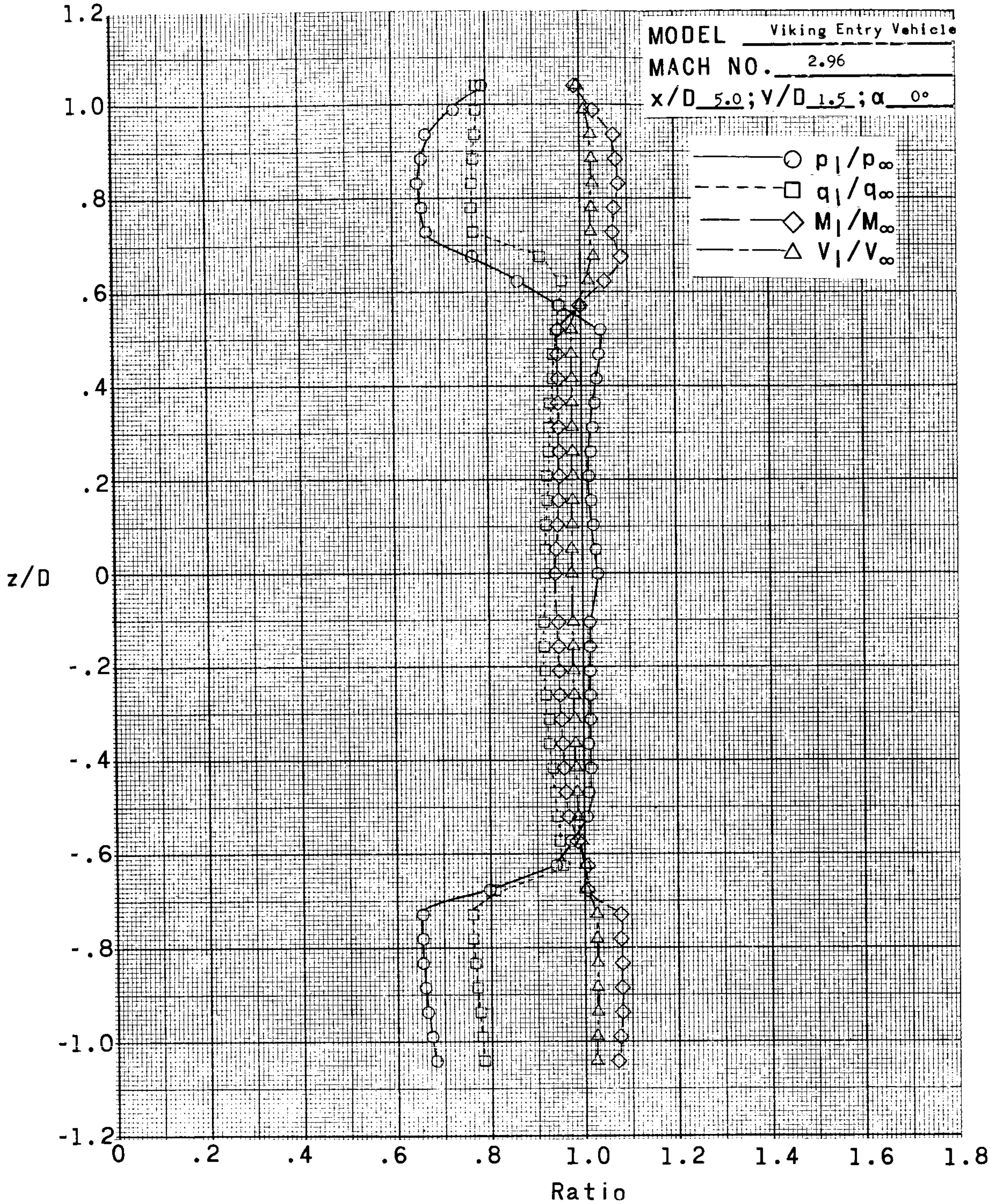
(p) x/D = 5.0; y/D = 3.0; α = 0°.

Figure 7.- Continued.



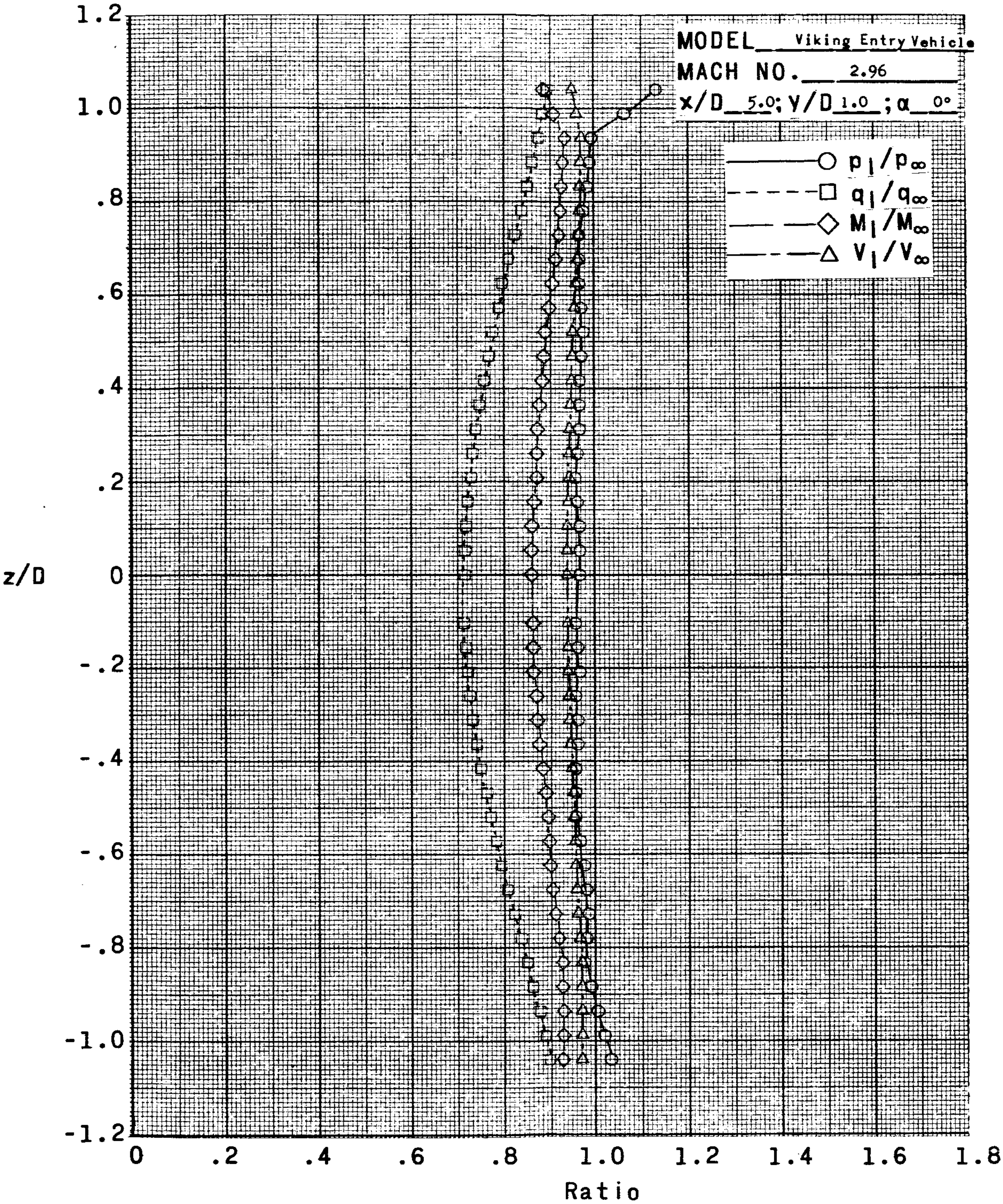
(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^0$.

Figure 7.- Continued.



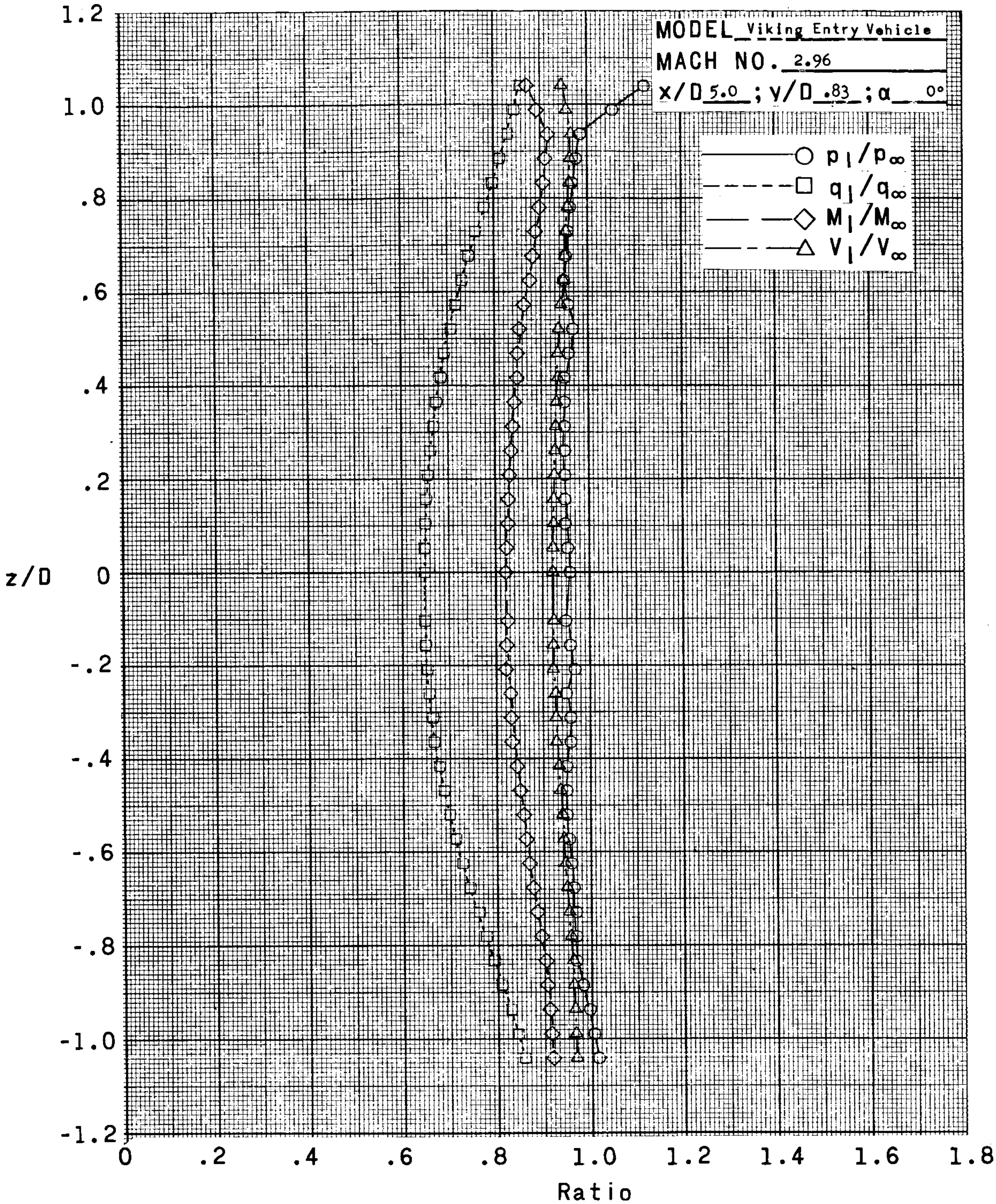
(r) $x/D = 5.0$; $y/D = 1.5$; $\alpha = 0^0$.

Figure 7.- Continued.



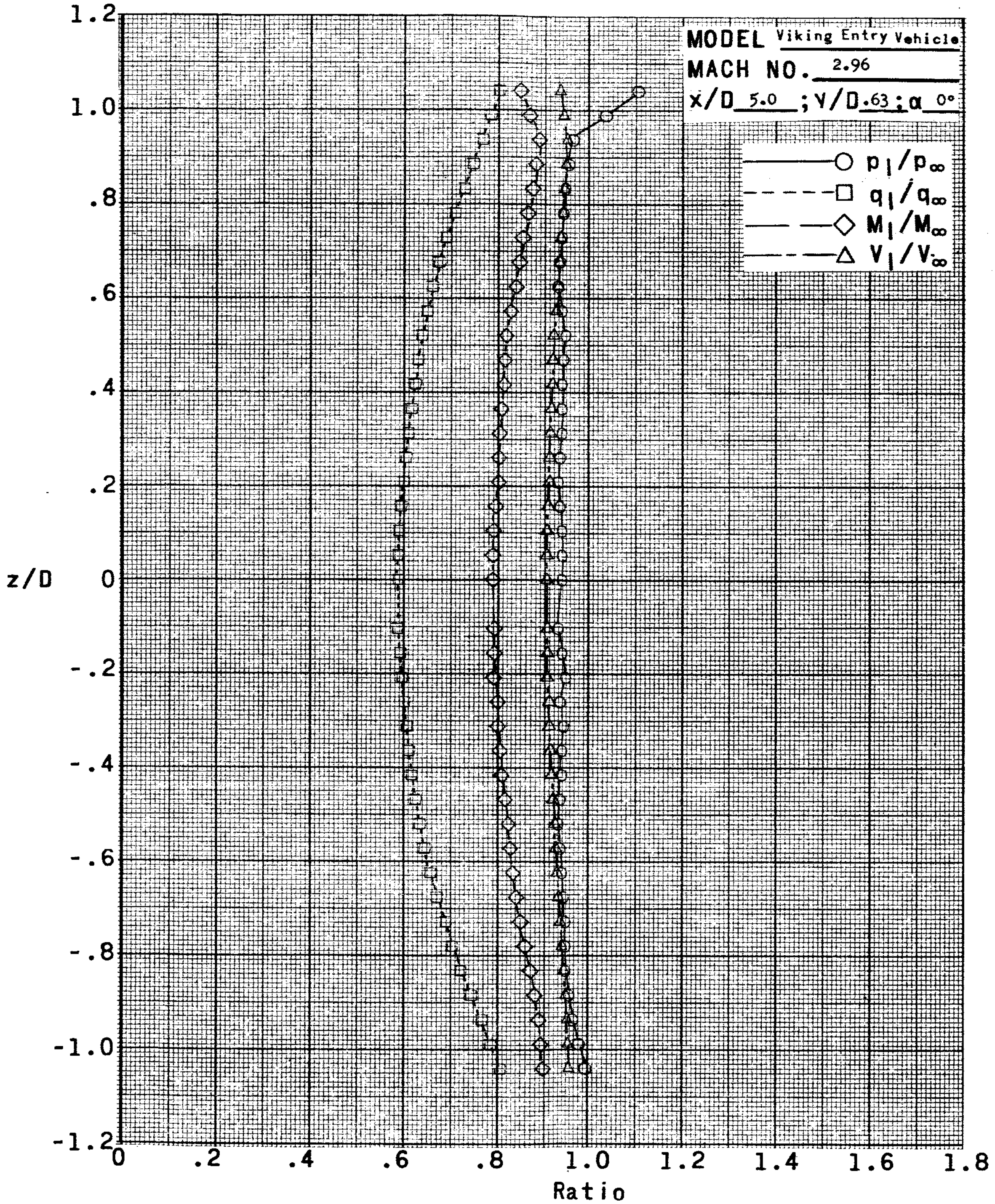
(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^{\circ}$.

Figure 7.- Continued.



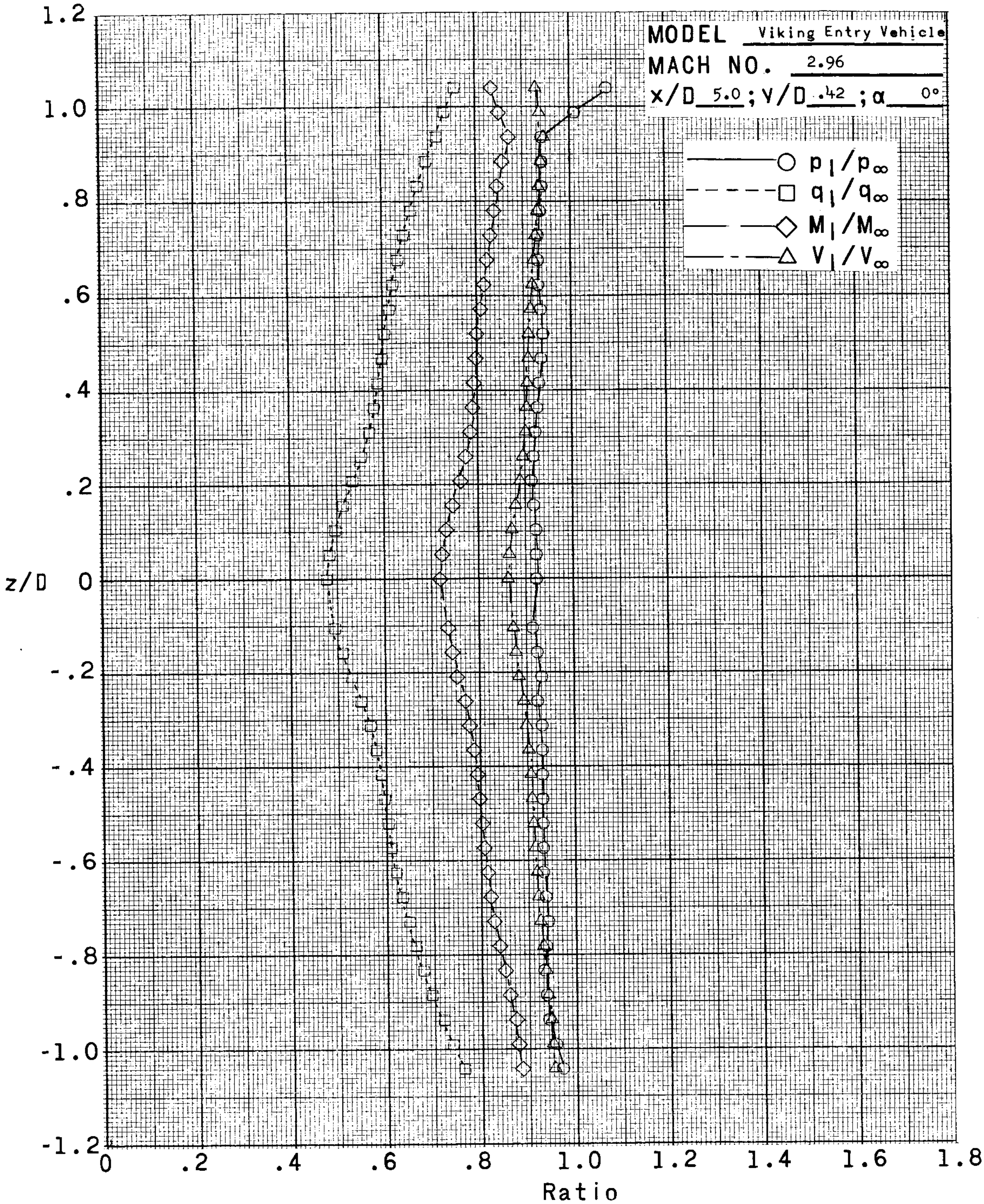
(t) $x/D = 5.0$; $y/D = 0.83$; $\alpha = 0^0$.

Figure 7.- Continued.



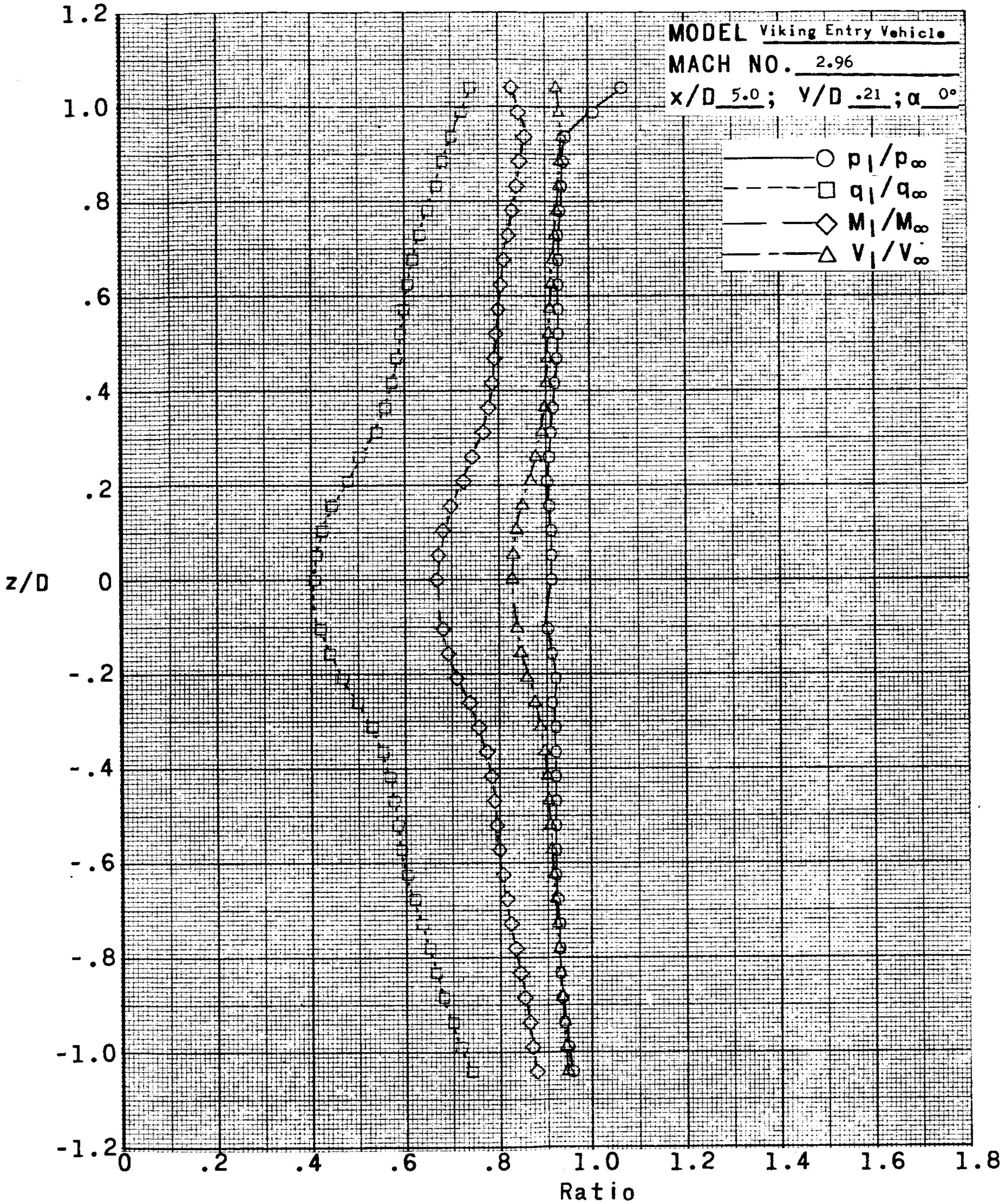
(u) $x/D = 5.0$; $y/D = 0.63$; $\alpha = 0^{o}$.

Figure 7.- Continued.



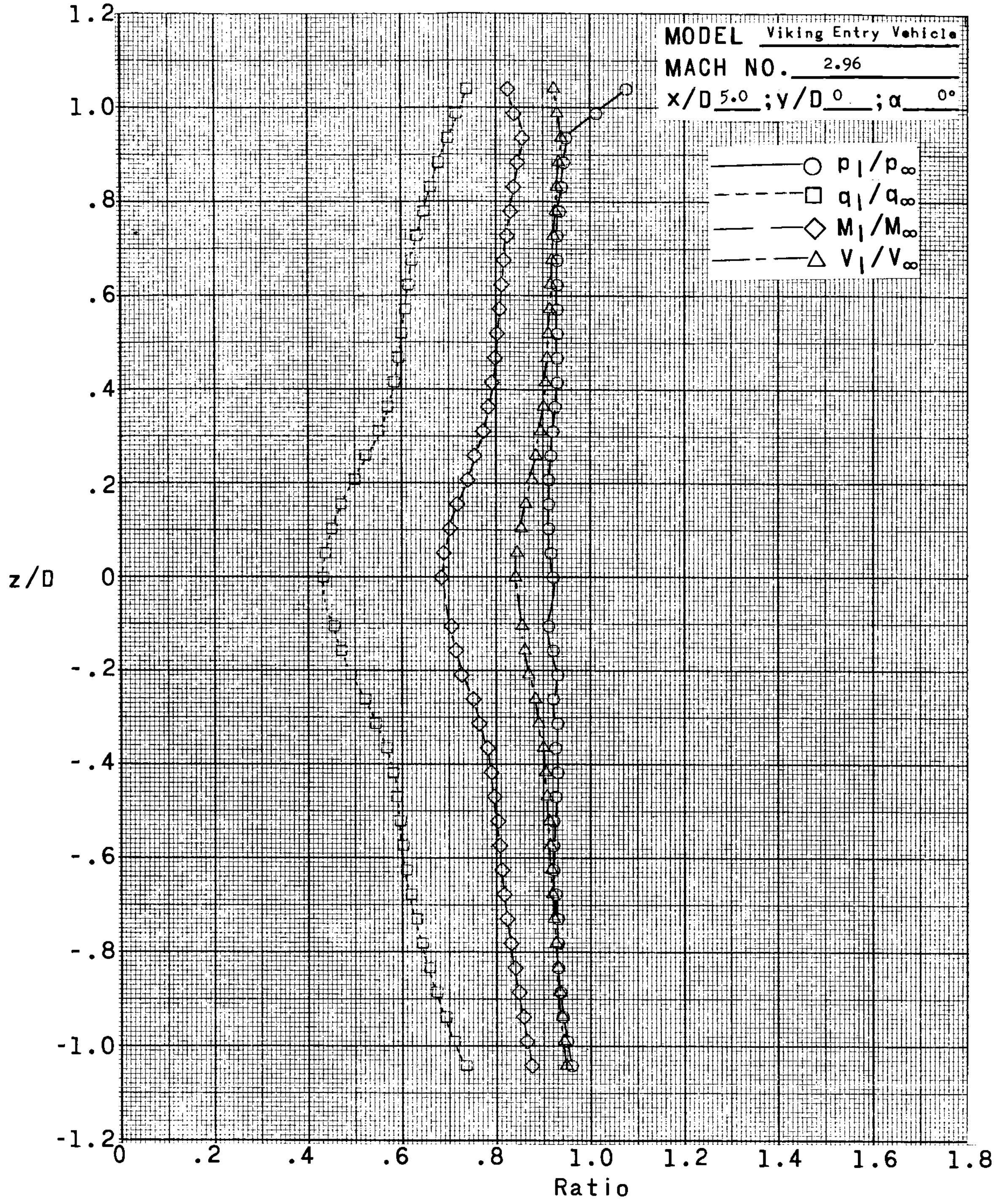
(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^{o}$.

Figure 7.- Continued.



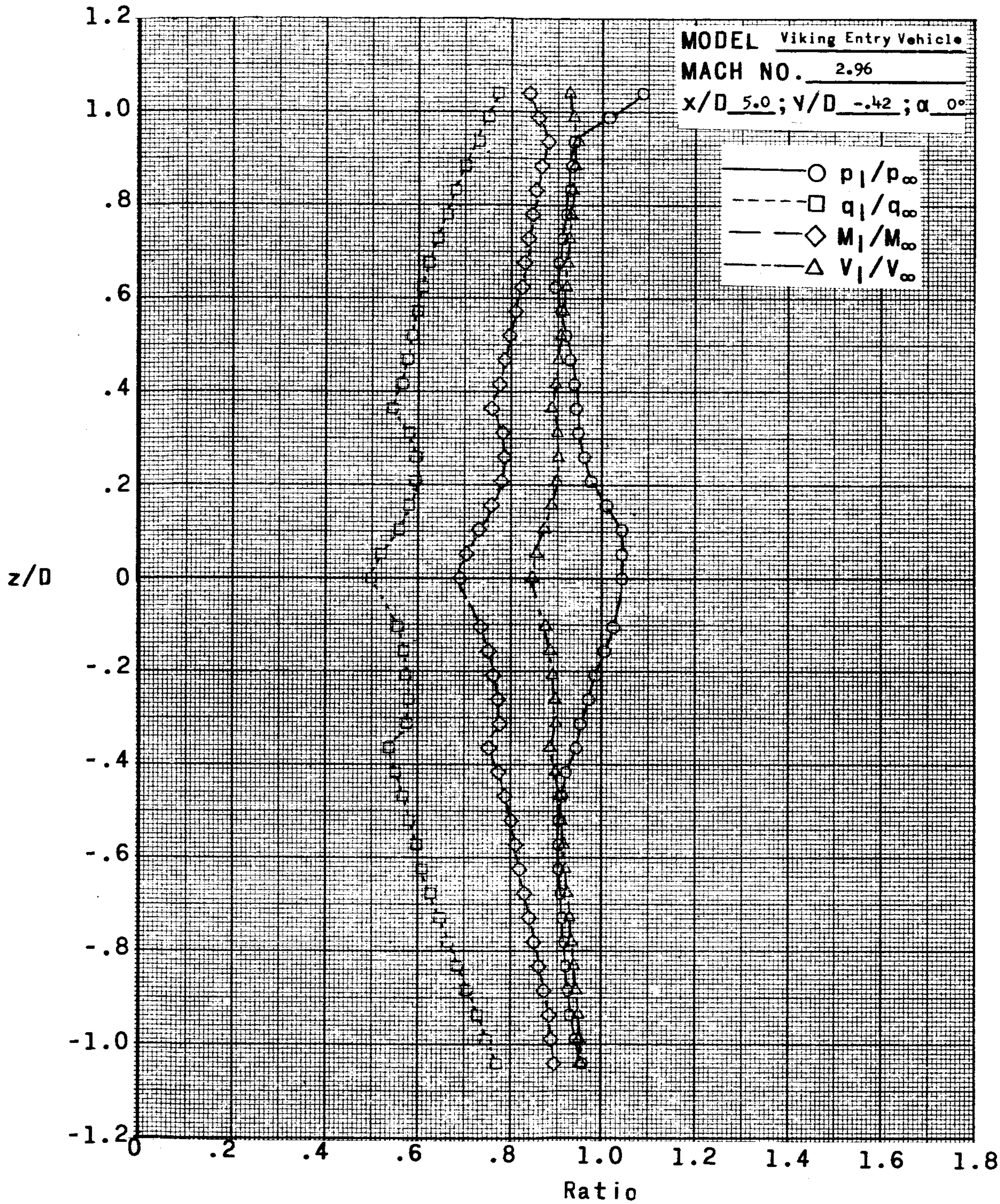
(w) x/D = 5.0; y/D = 0.21; α = 0°.

Figure 7.- Continued.



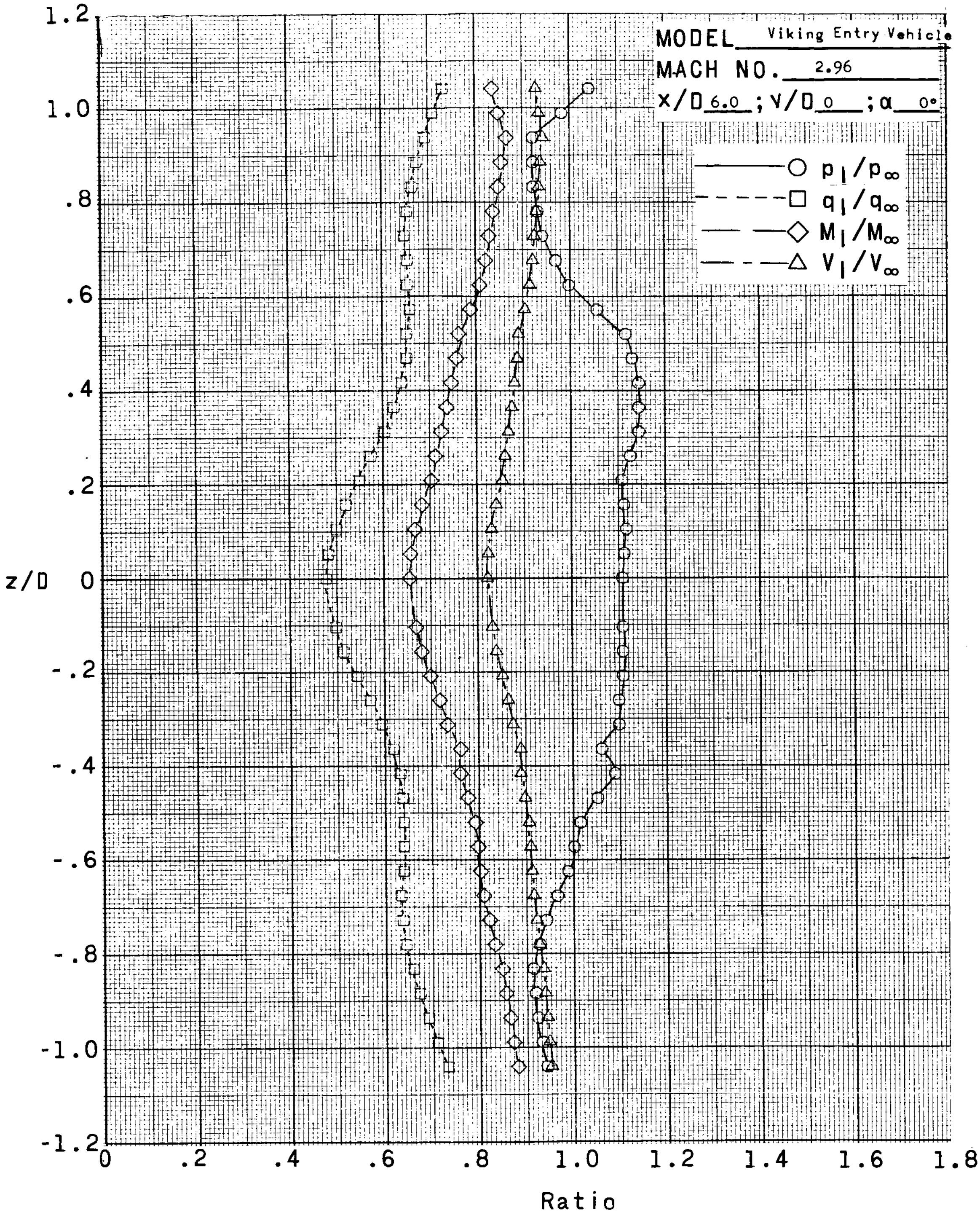
(x) x/D = 5.0; y/D = 0; α = 0°.

Figure 7.- Continued.



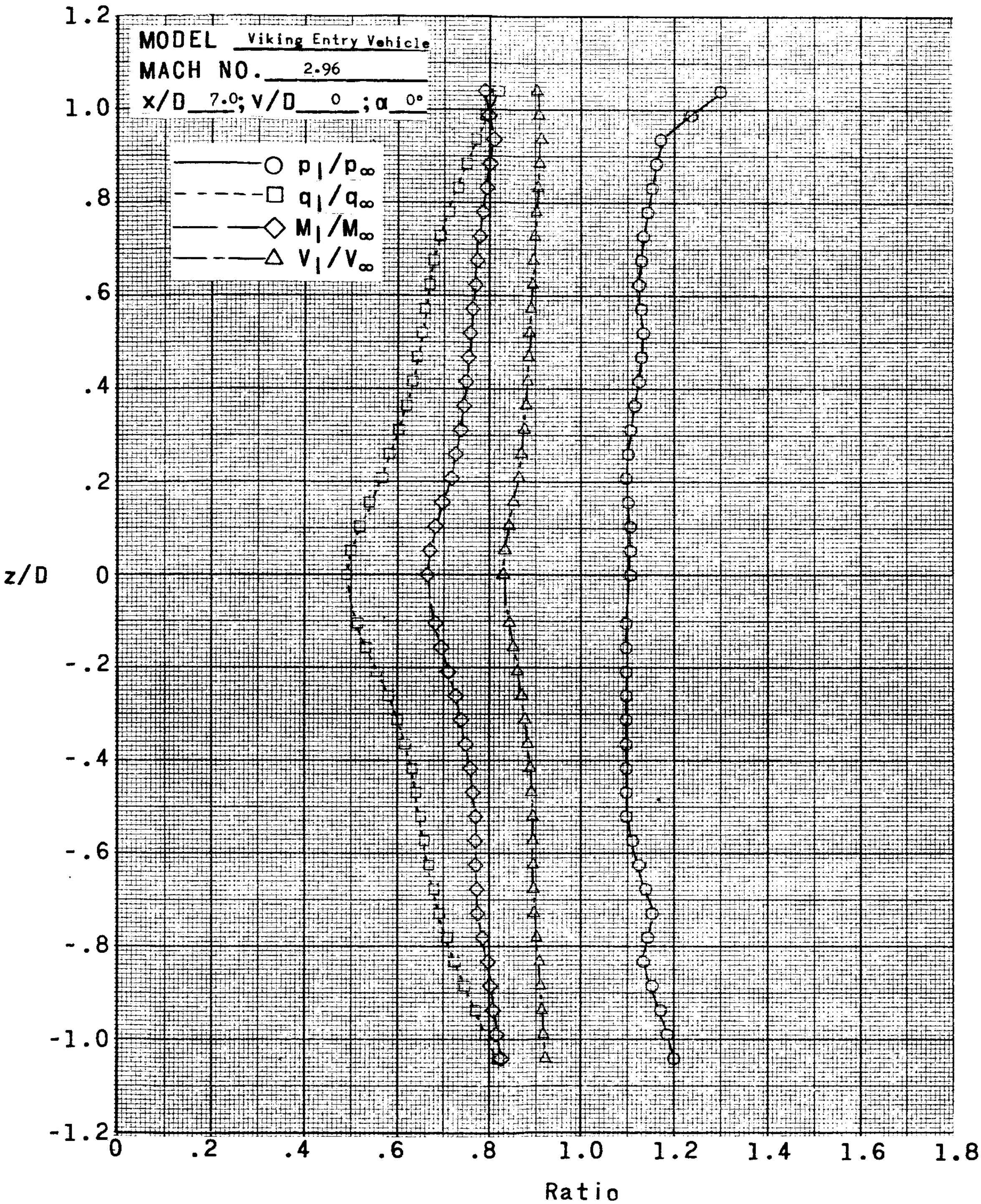
(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^{\circ}$.

Figure 7.- Continued.



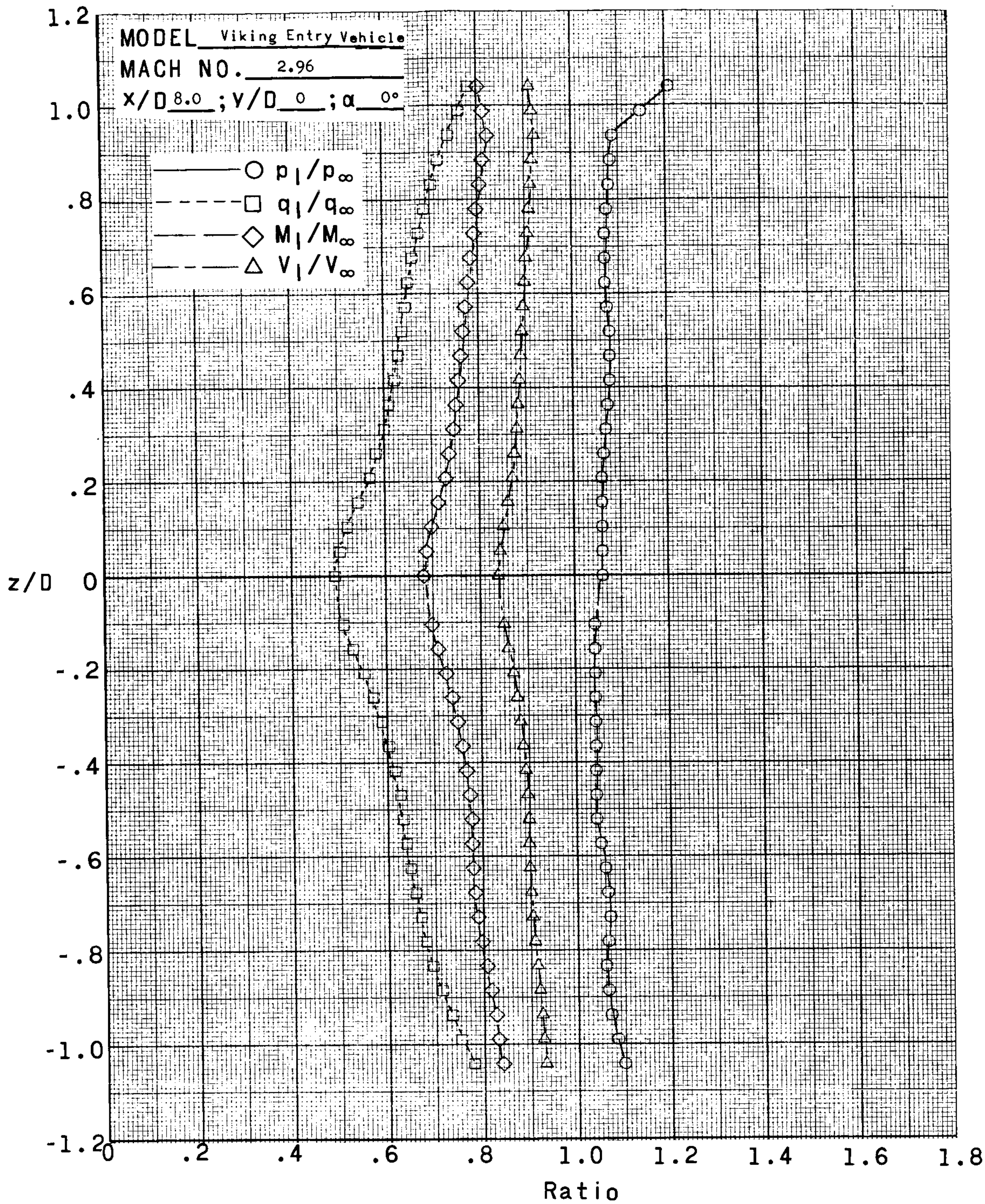
(z) $x/D = 6.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 7.- Continued.



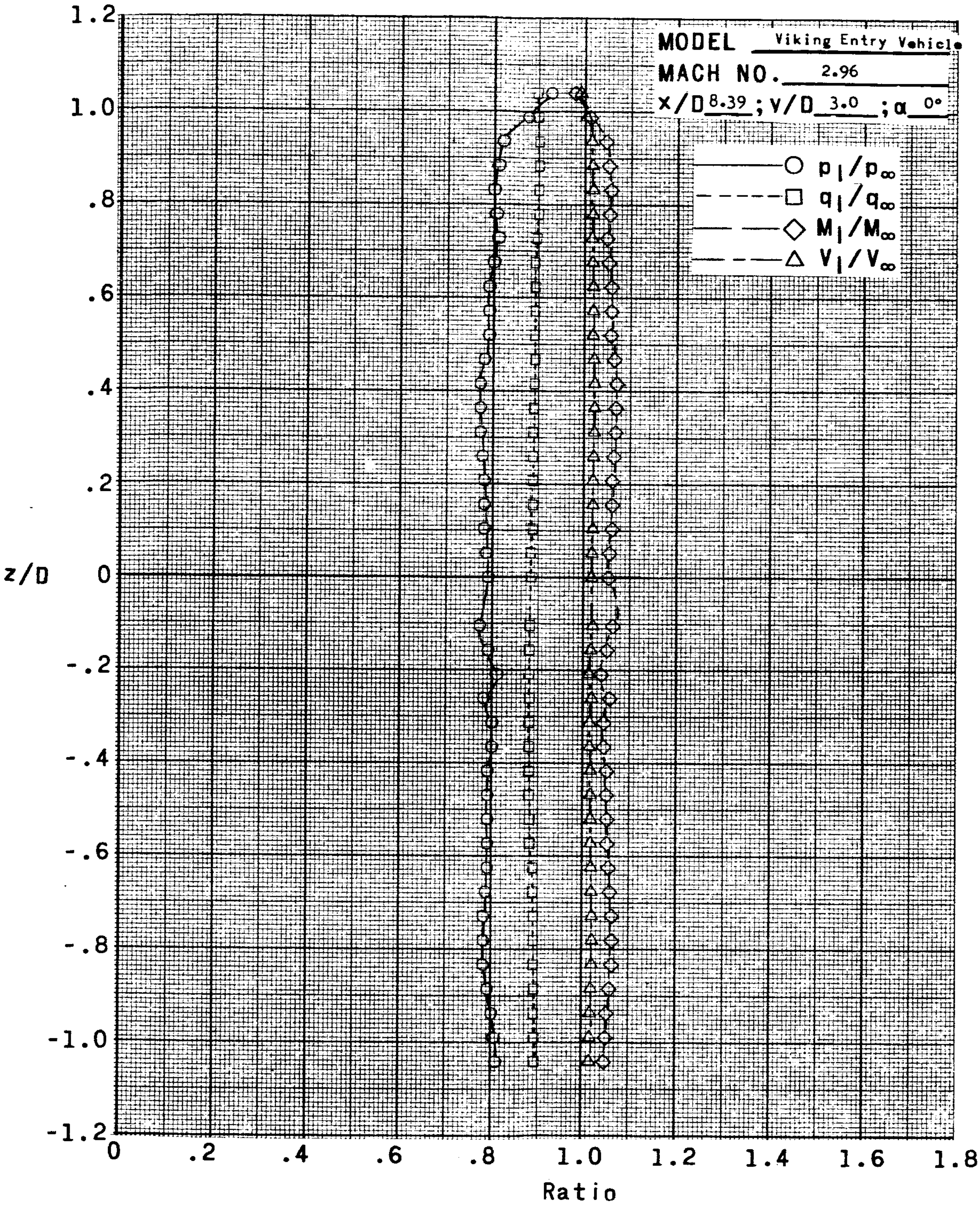
(aa) x/D = 7.0; y/D = 0; α = 0°.

Figure 7.- Continued.



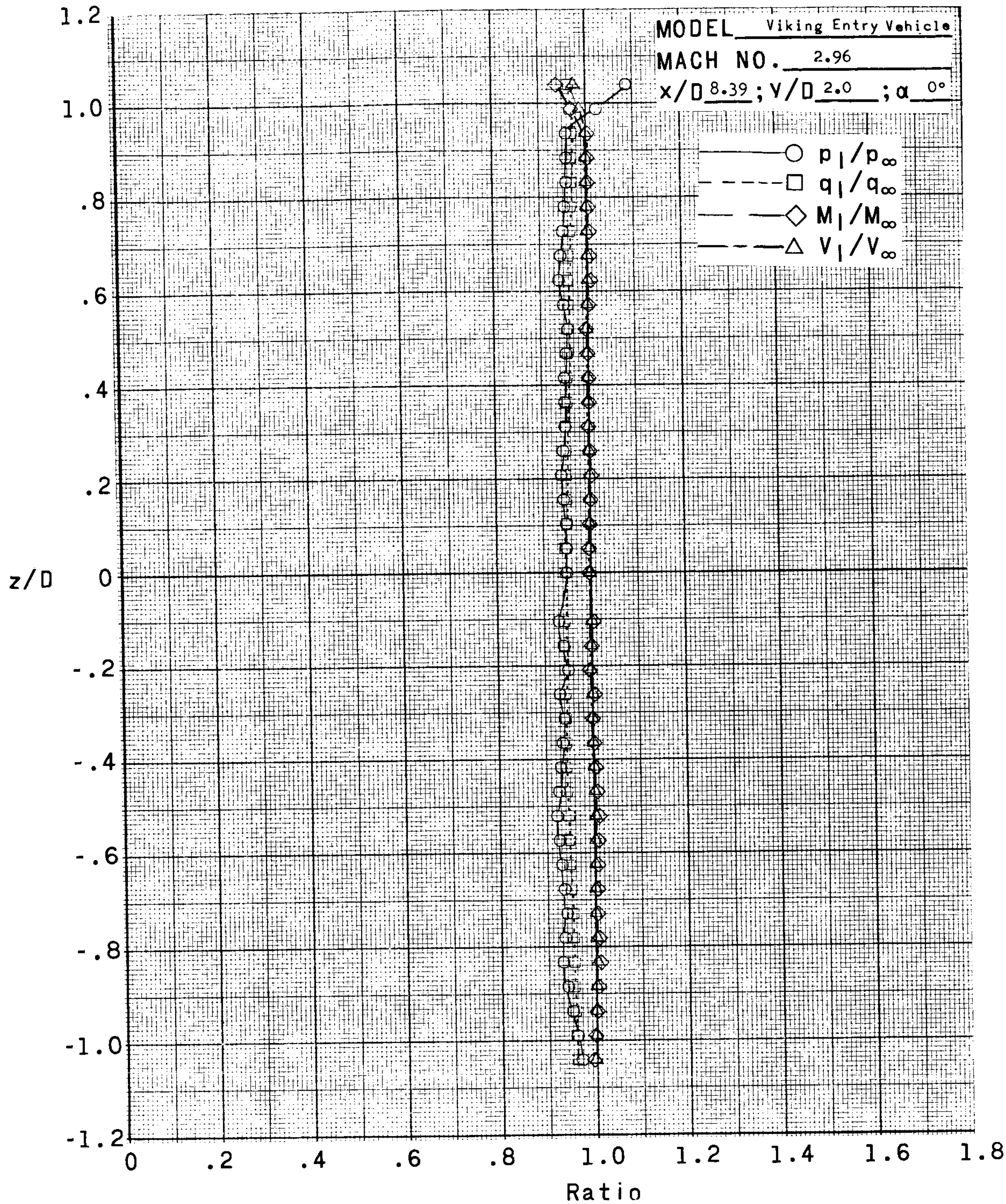
(bb) x/D = 8.0; y/D = 0; α = 0°.

Figure 7.- Continued.



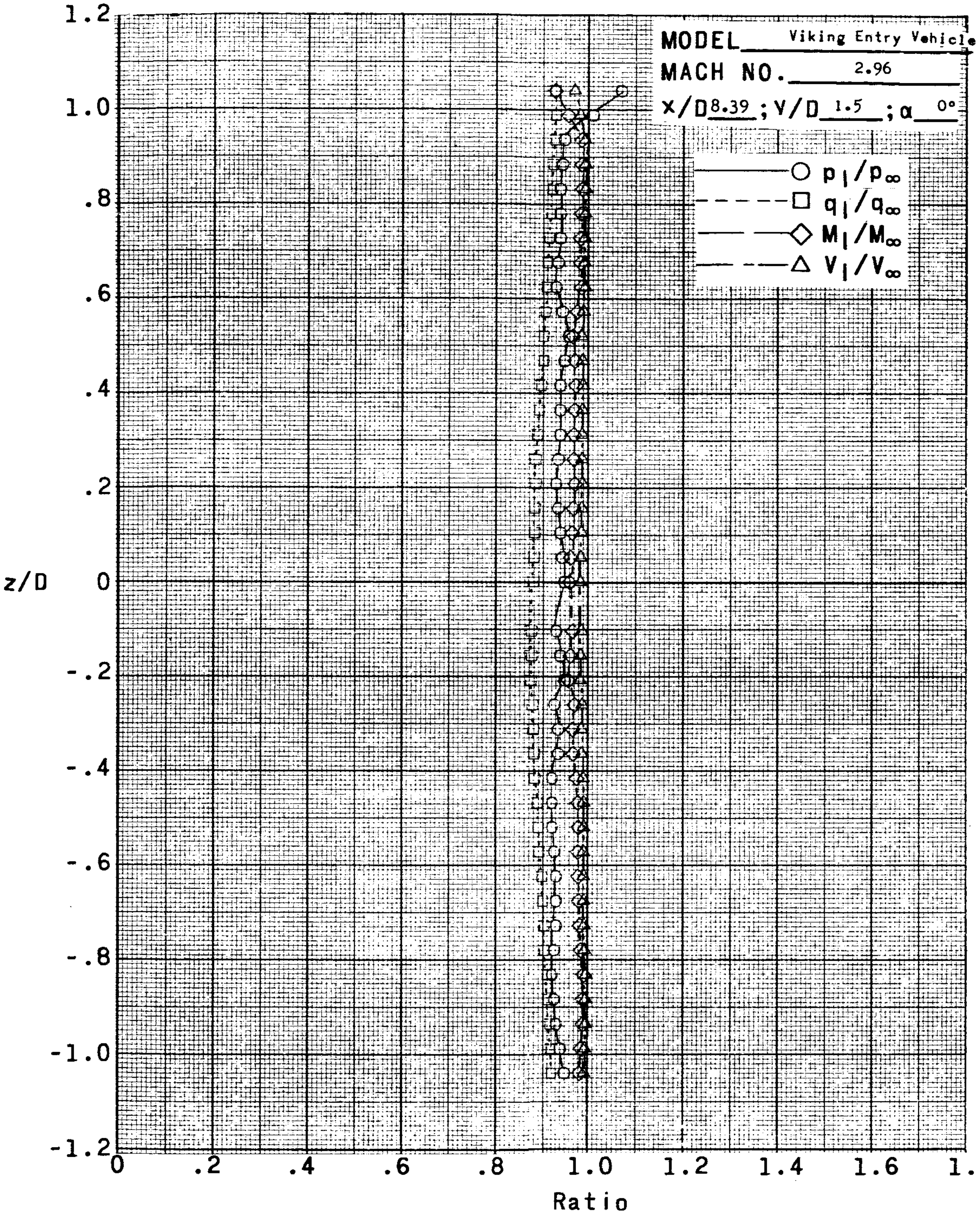
(cc) x/D = 8.39; y/D = 3.0; α = 0°.

Figure 7.- Continued.



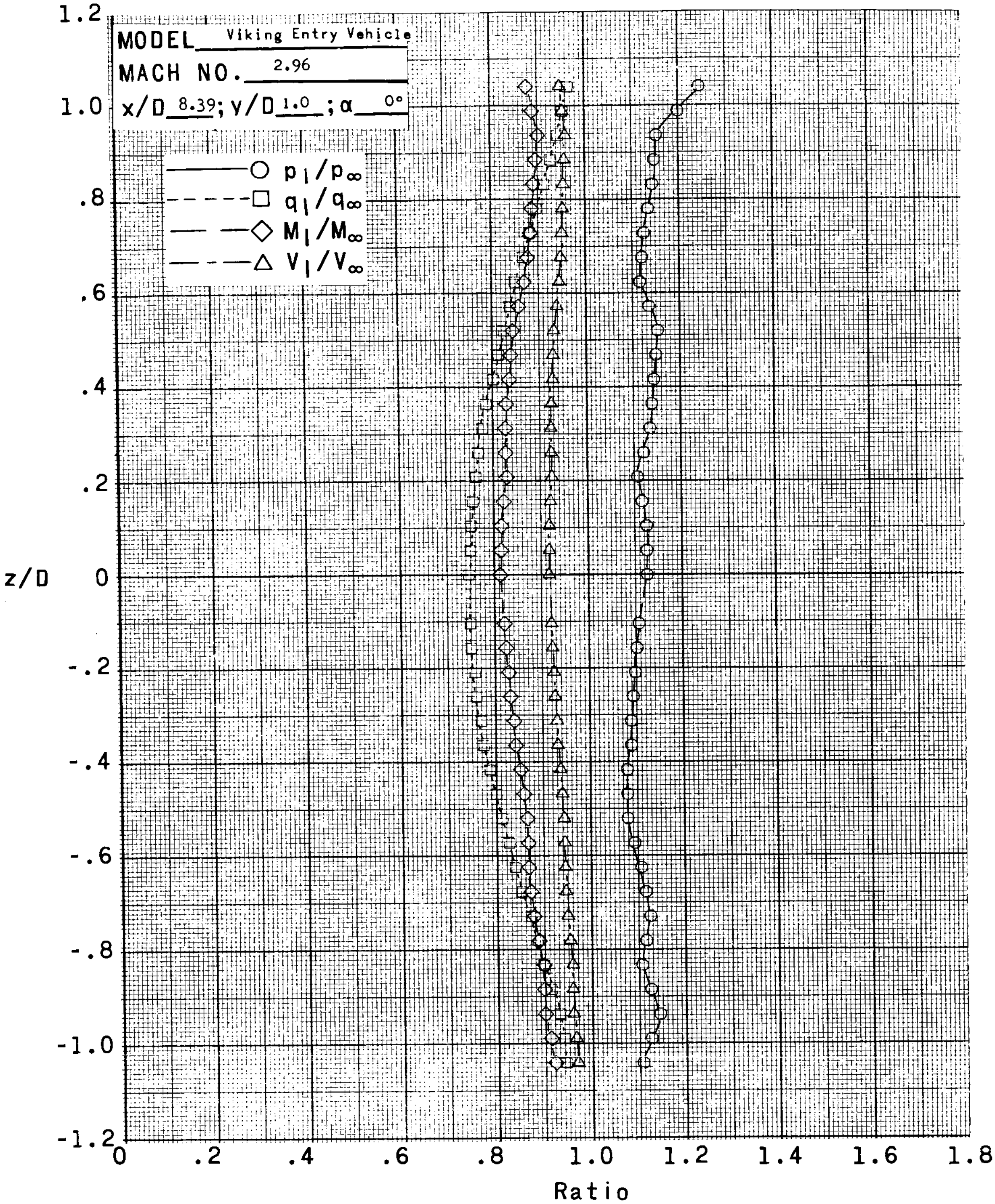
(dd) x/D = 8.39; y/D = 2.0; α = 0°.

Figure 7.- Continued.



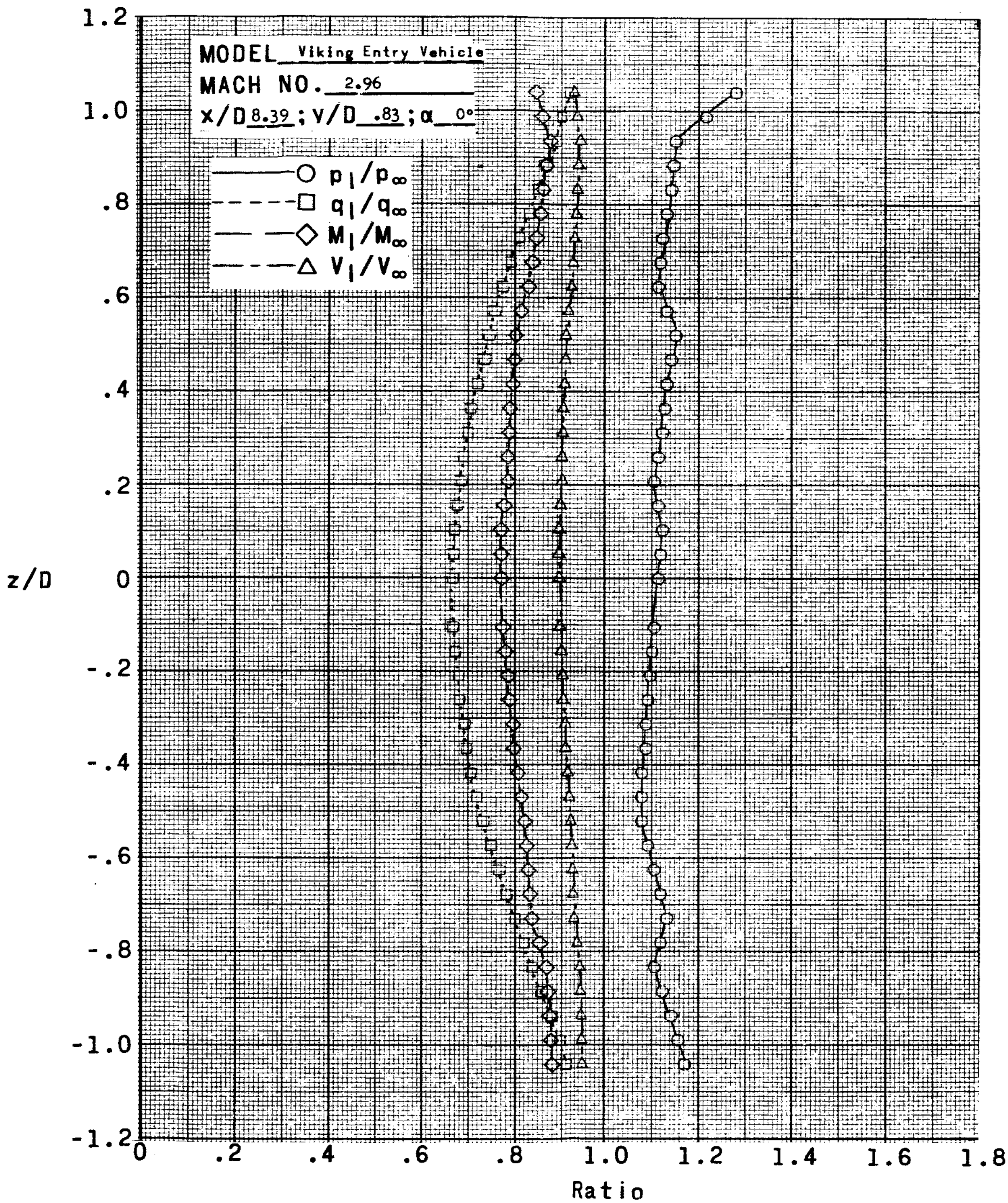
(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^0$.

Figure 7.- Continued.



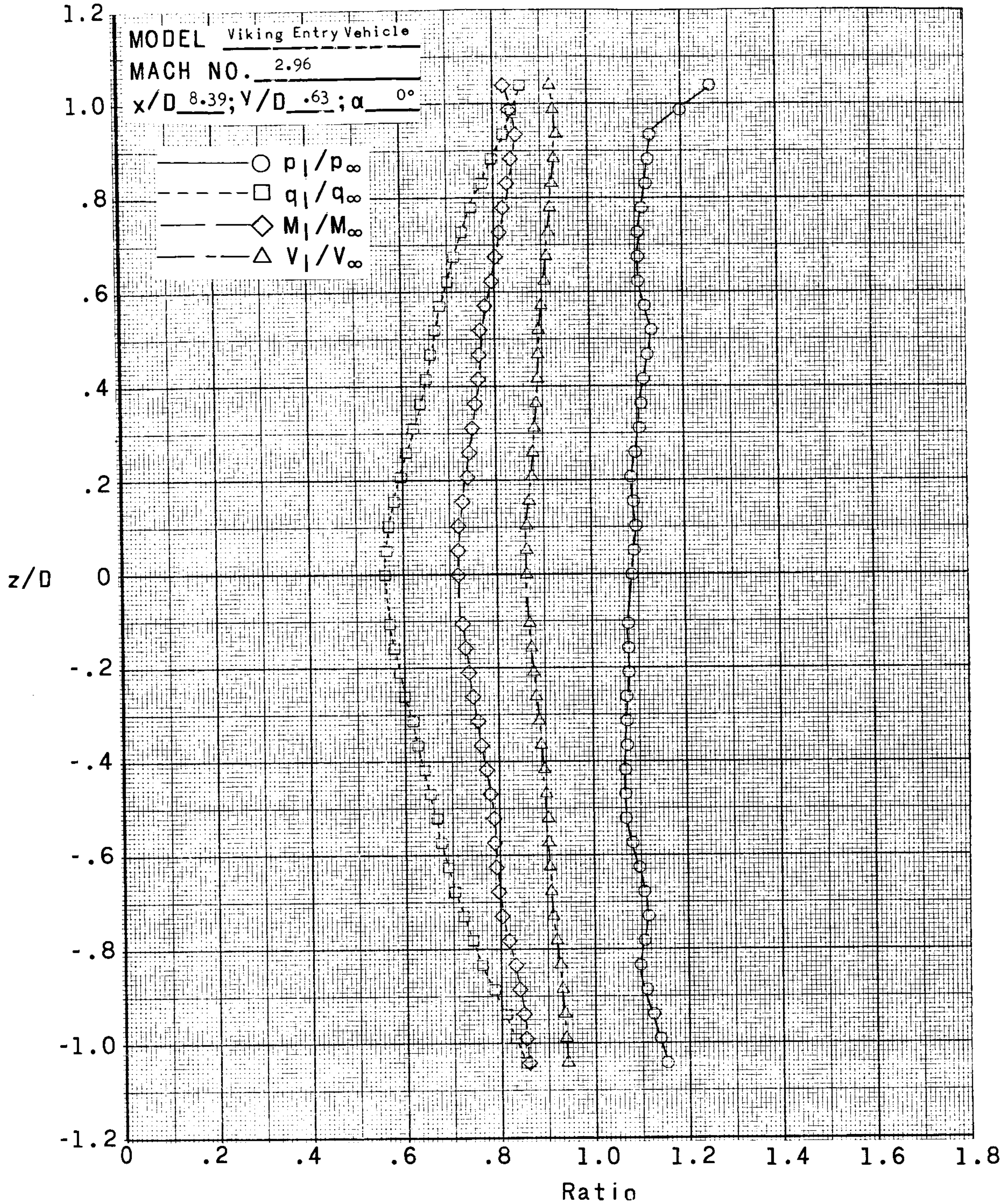
(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^0$.

Figure 7.- Continued.



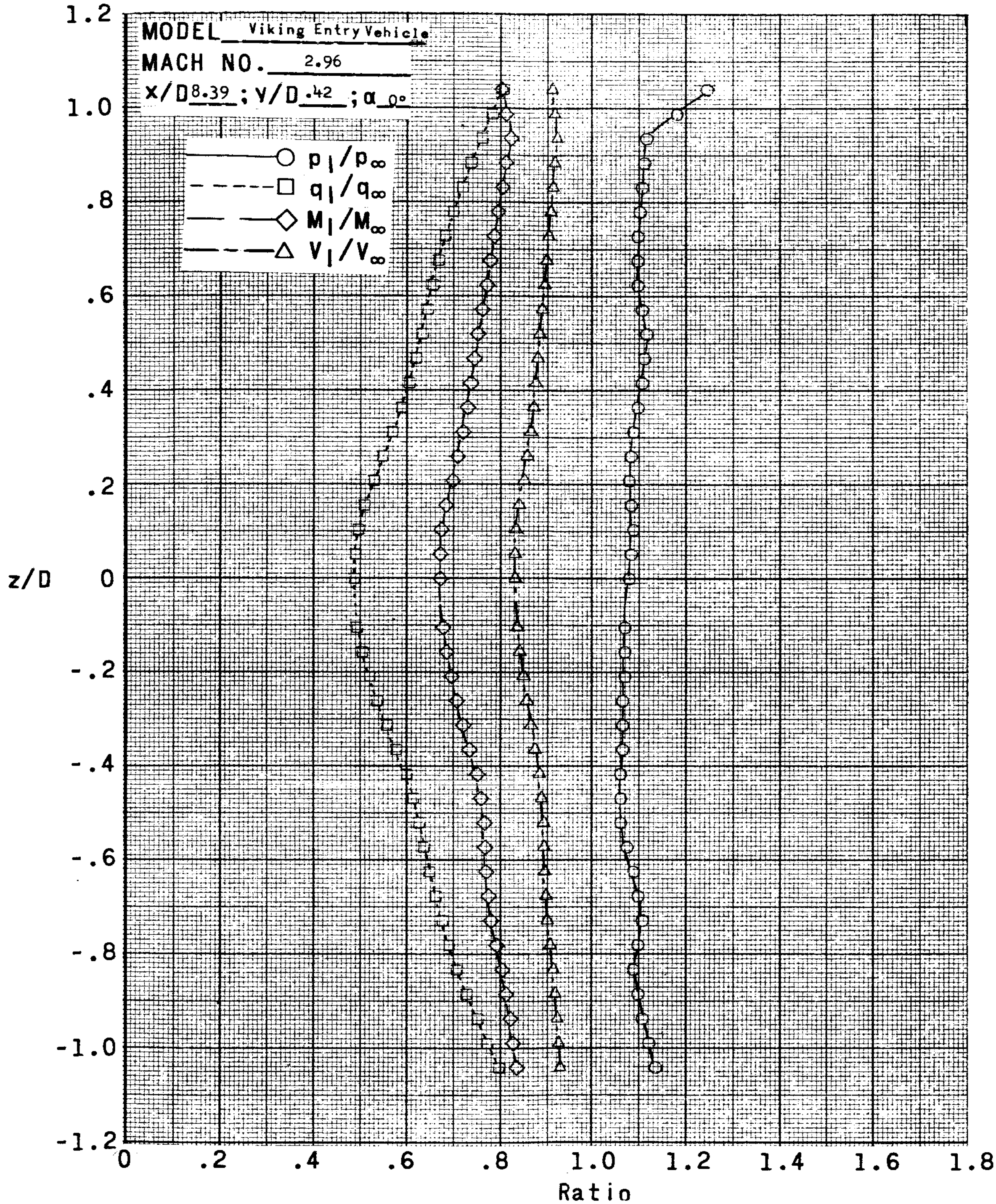
(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^{\circ}$.

Figure 7.- Continued.



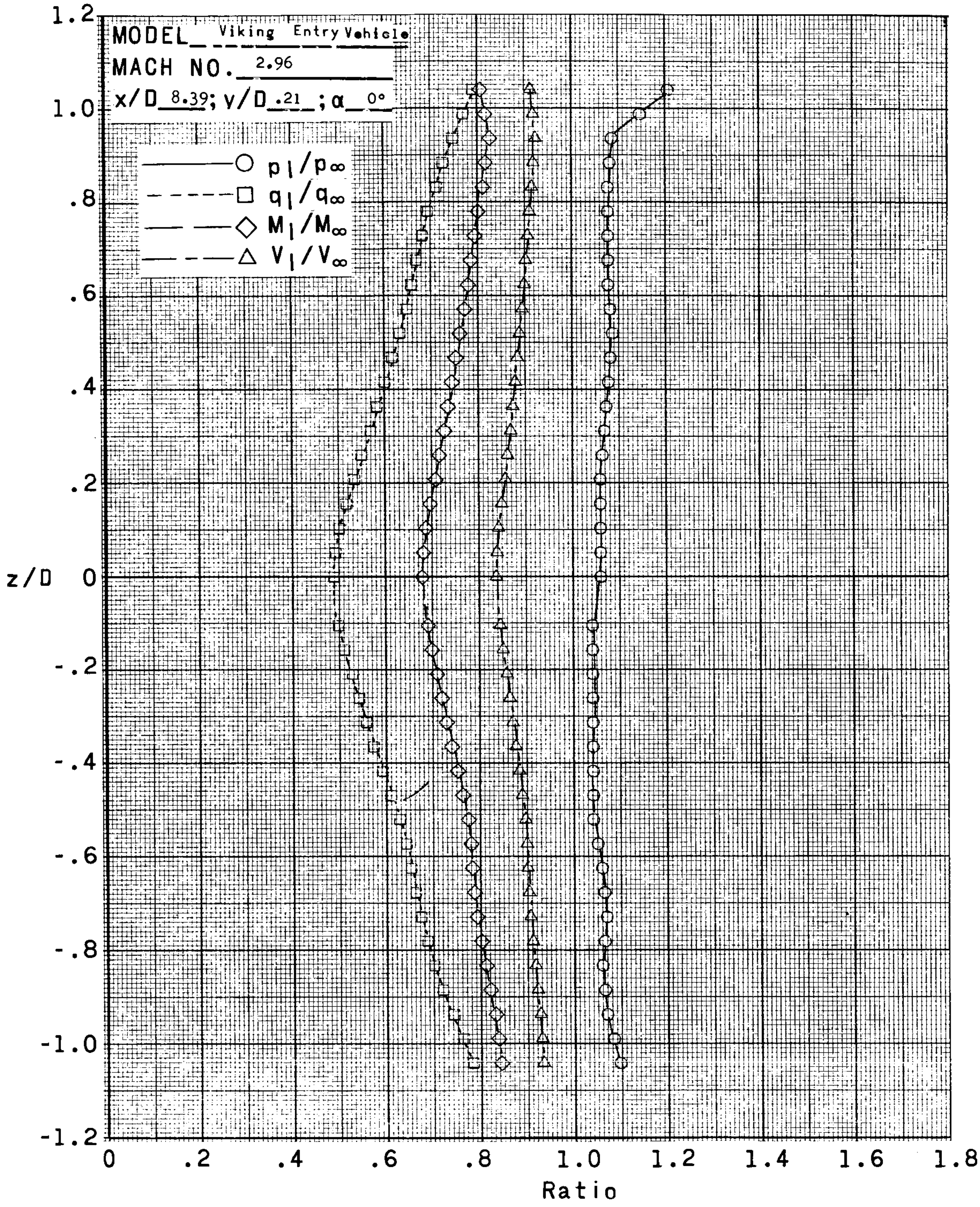
(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^0$.

Figure 7.- Continued.



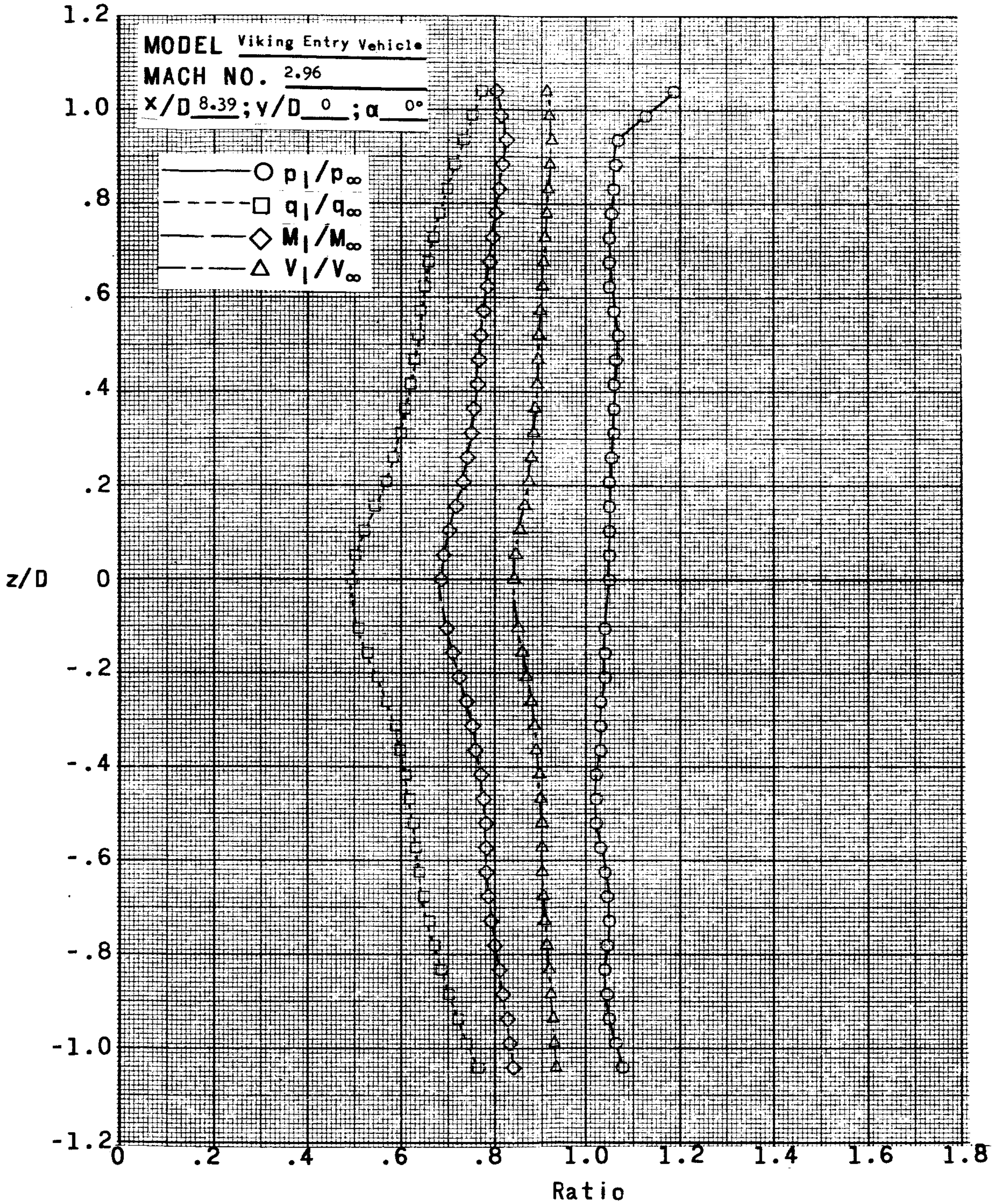
(ii) x/D = 8.39; y/D = 0.42; α = 0°.

Figure 7.- Continued.



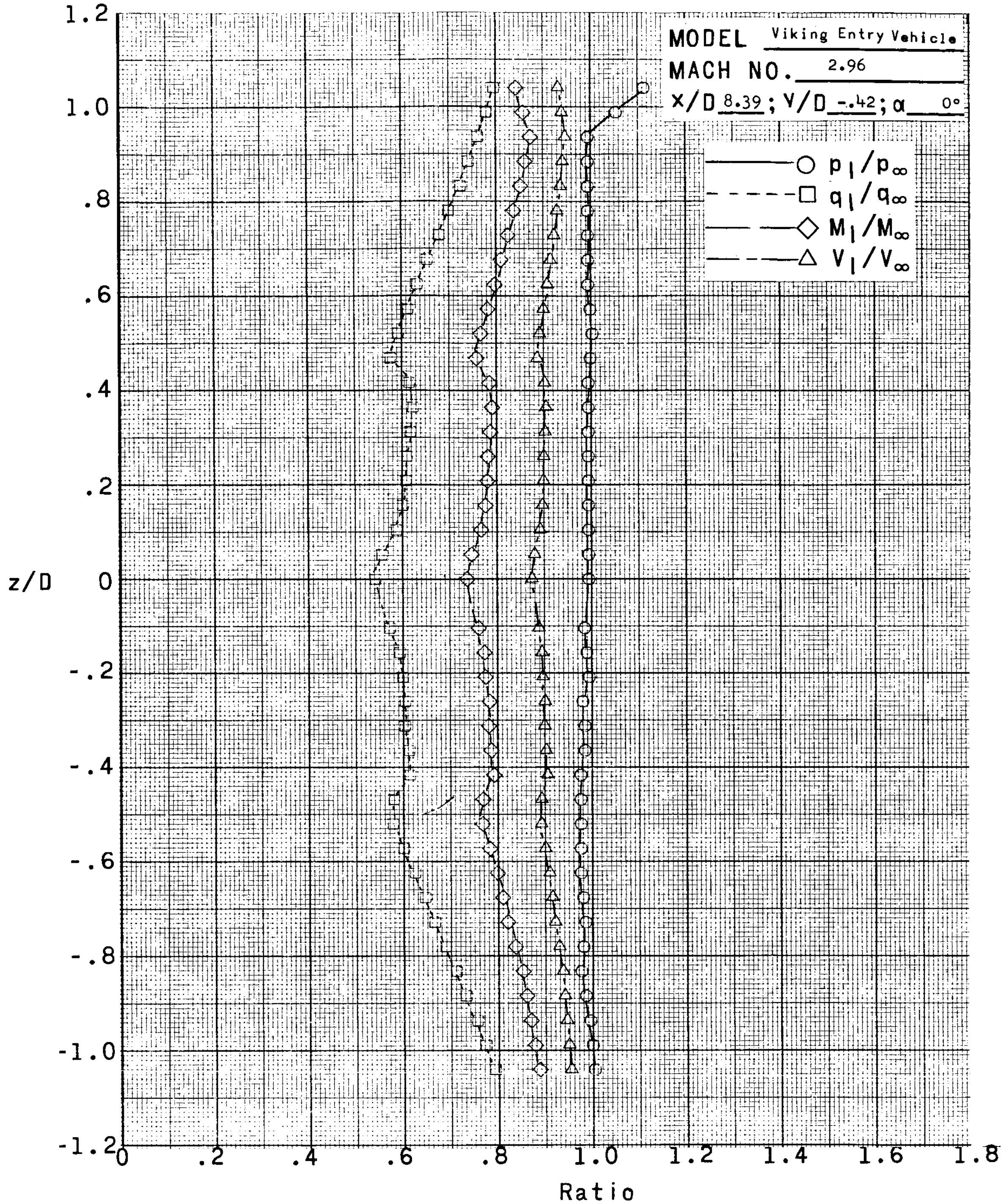
(jj) x/D = 8.39; y/D = 0.21; α = 0°.

Figure 7.- Continued.



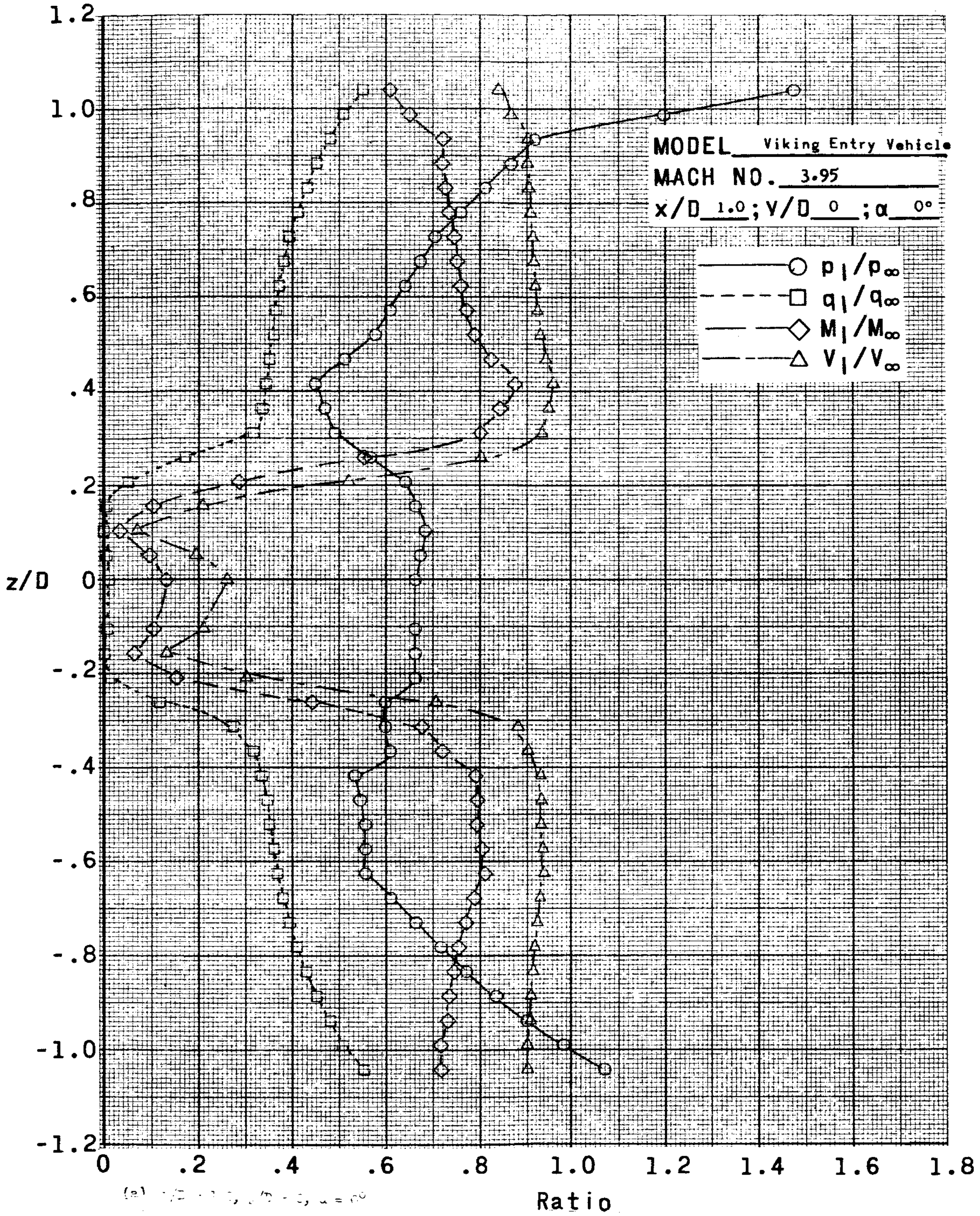
(kk) x/D = 8.39; y/D = 0; α = 0°.

Figure 7.- Continued.



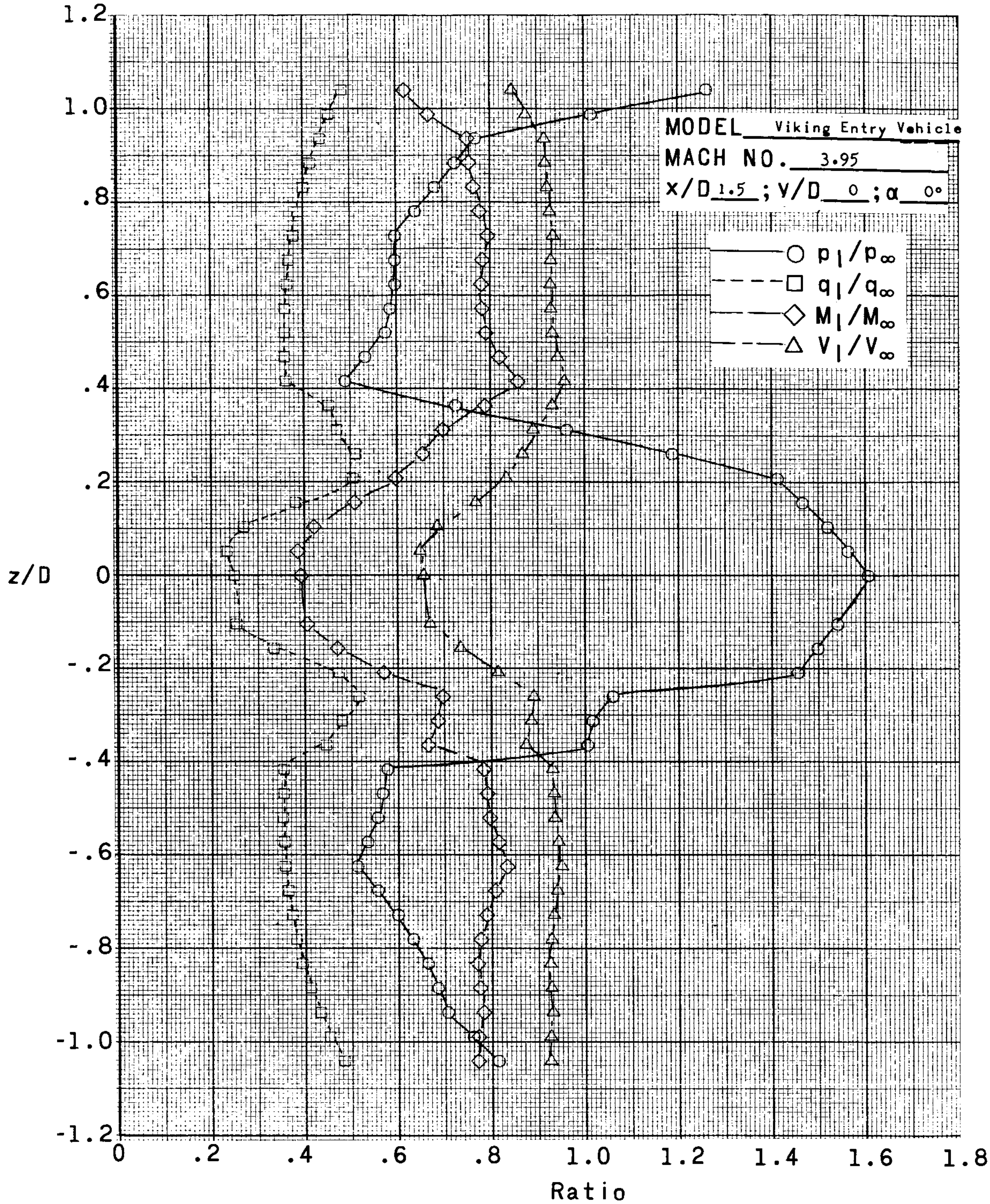
(ll) x/D = 8.39; y/D = -0.42; α = 0°.

Figure 7.- Concluded.



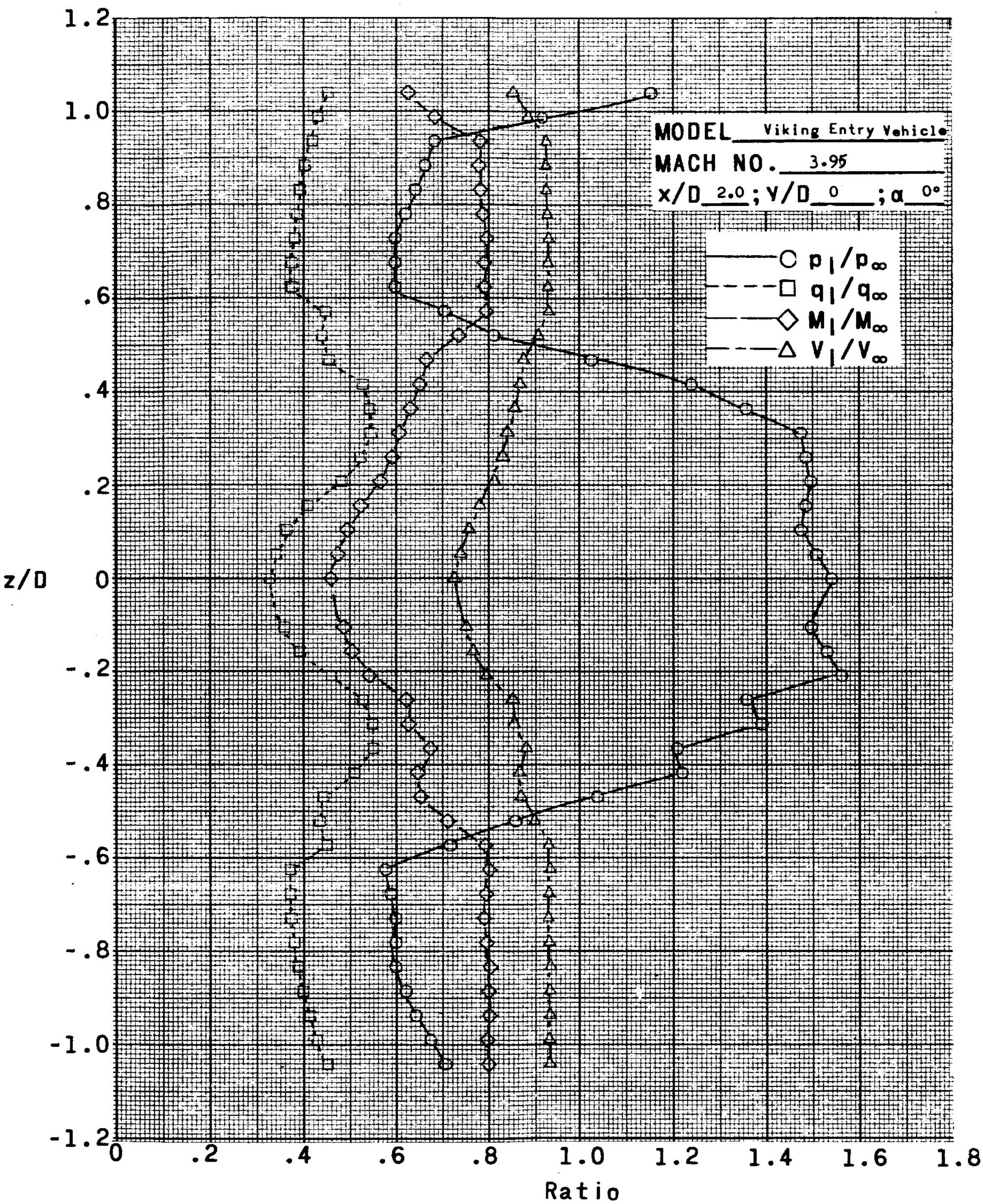
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 0^{\circ}$.

Figure 8.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D in the wake of the Viking Entry Vehicle at a Mach number of 3.95 and a Reynolds number of 1.65×10^6 per foot $(5.42 \times 10^6$ per meter).



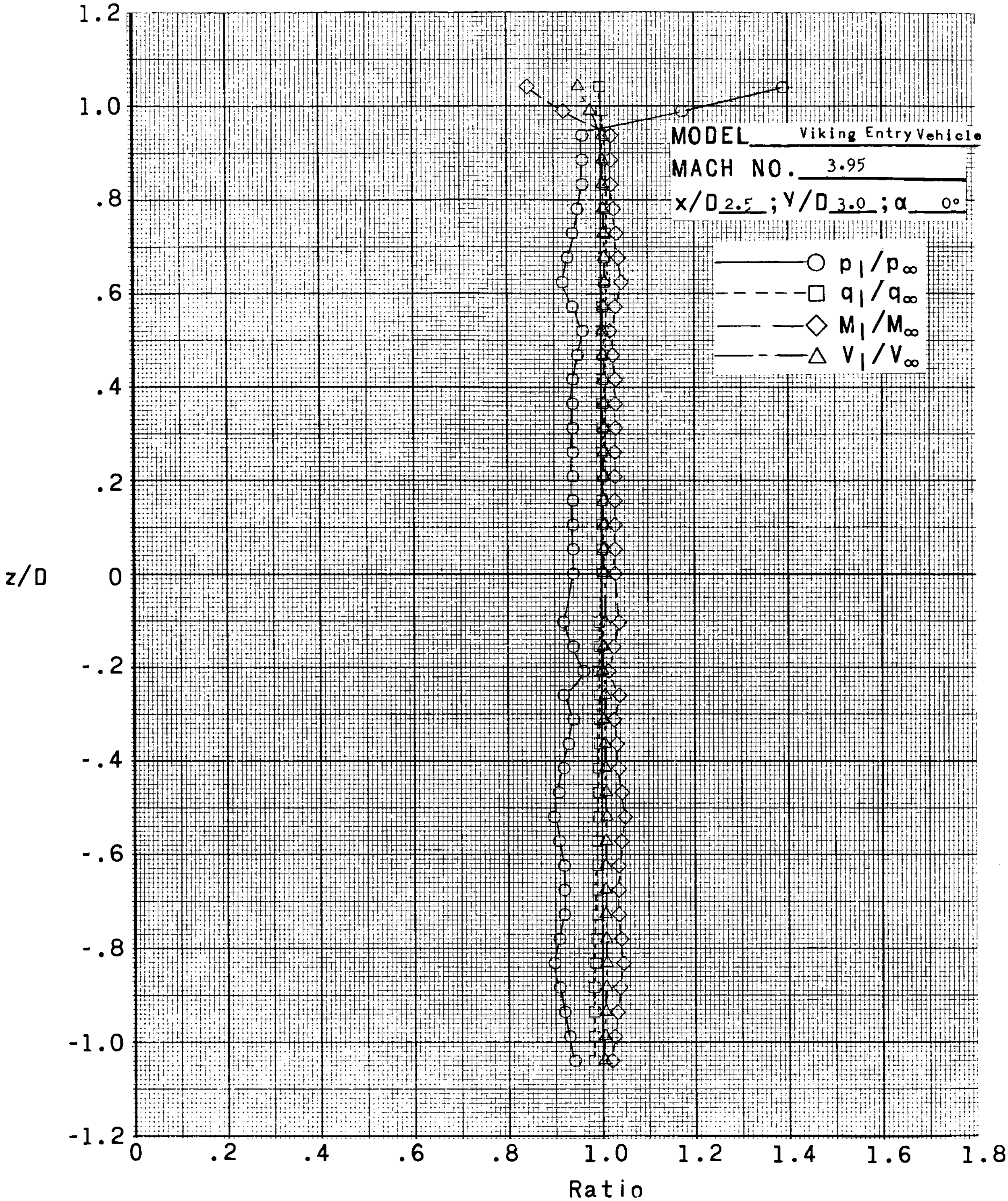
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 0^{\circ}$.

Figure 8.- Continued.



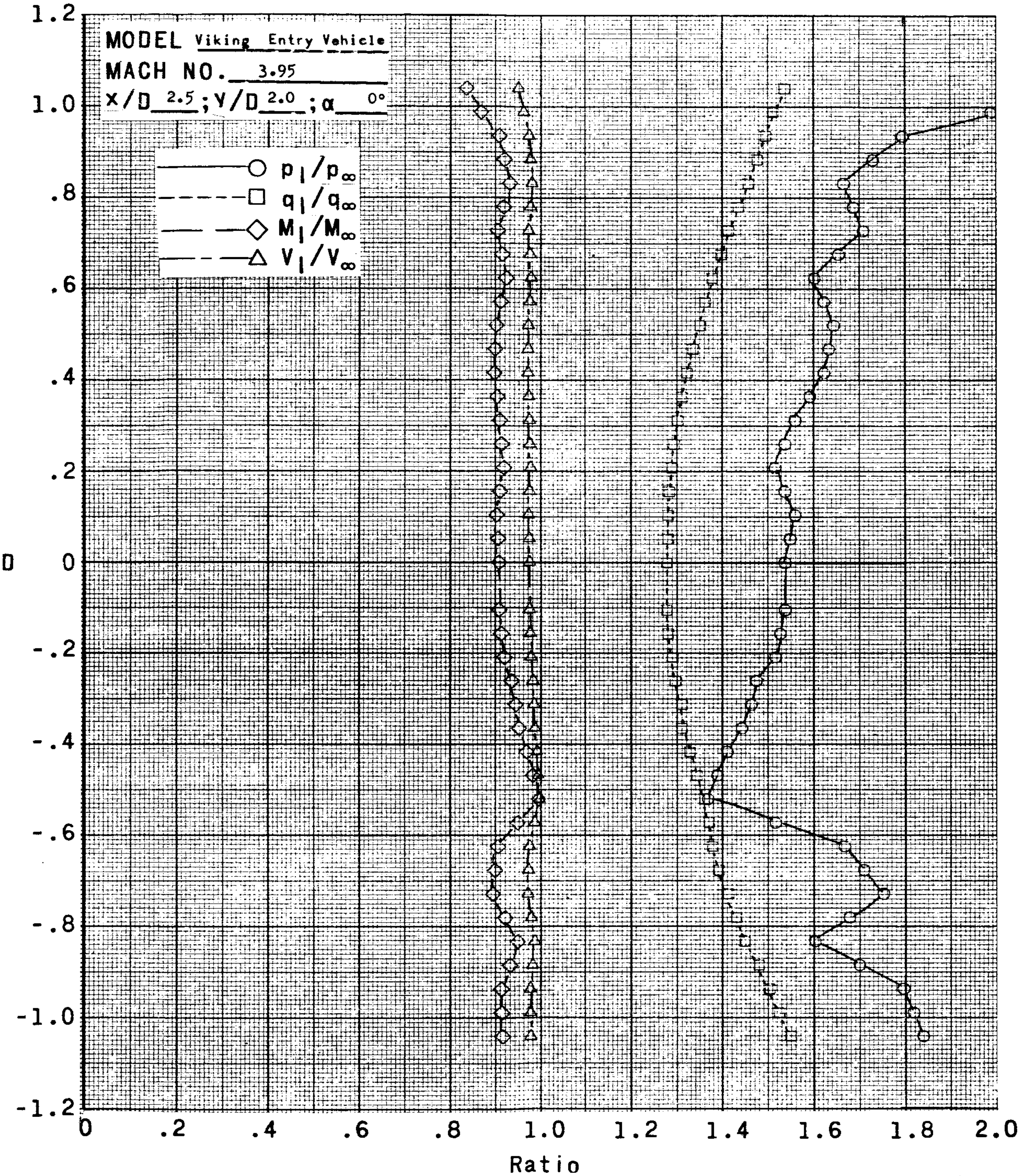
(c) x/D = 2.0; y/D = 0; α = 0°.

Figure 8.- Continued.



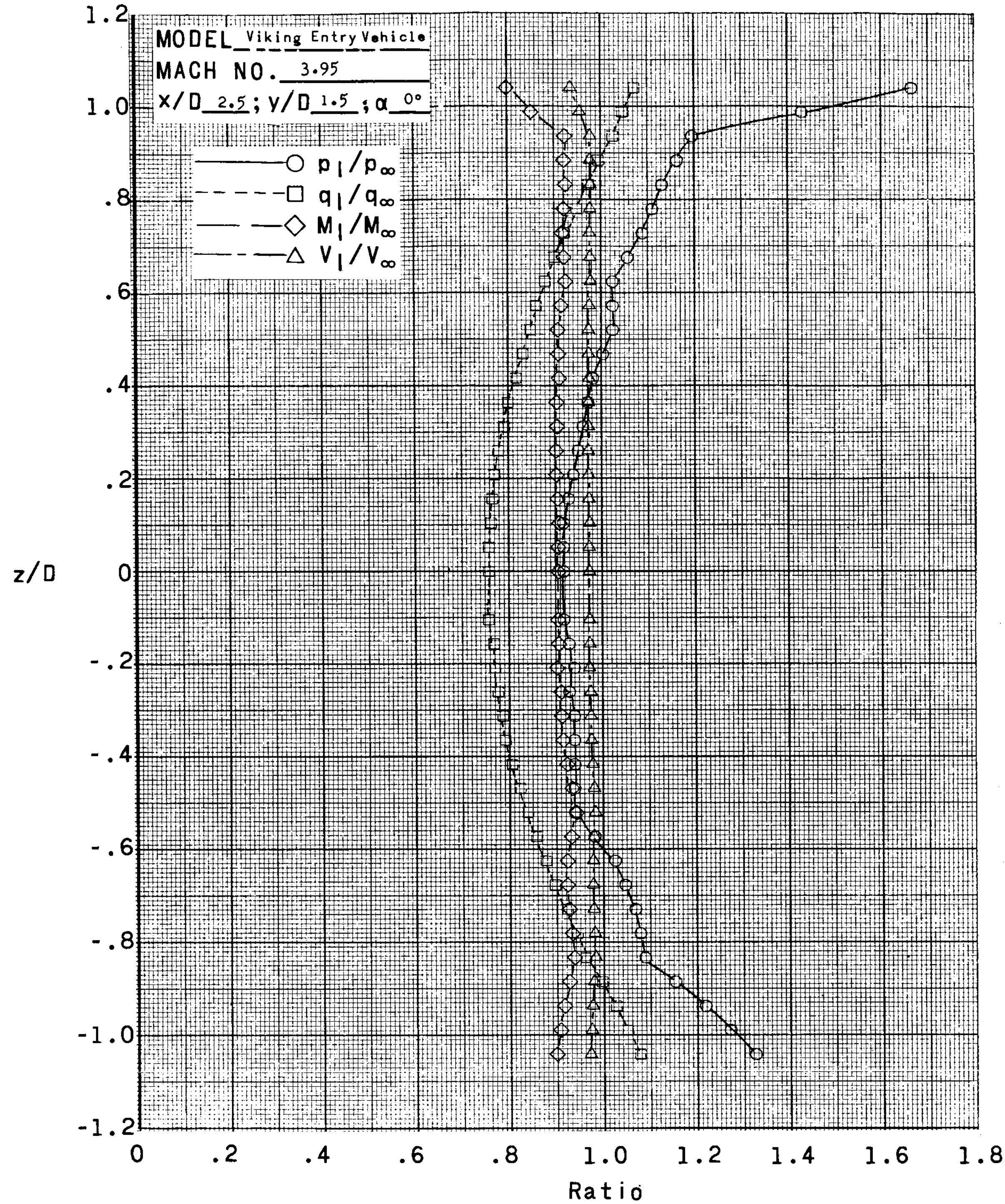
(d) x/D = 2.5; y/D = 3.0; α = 0°.

Figure 8.- Continued.



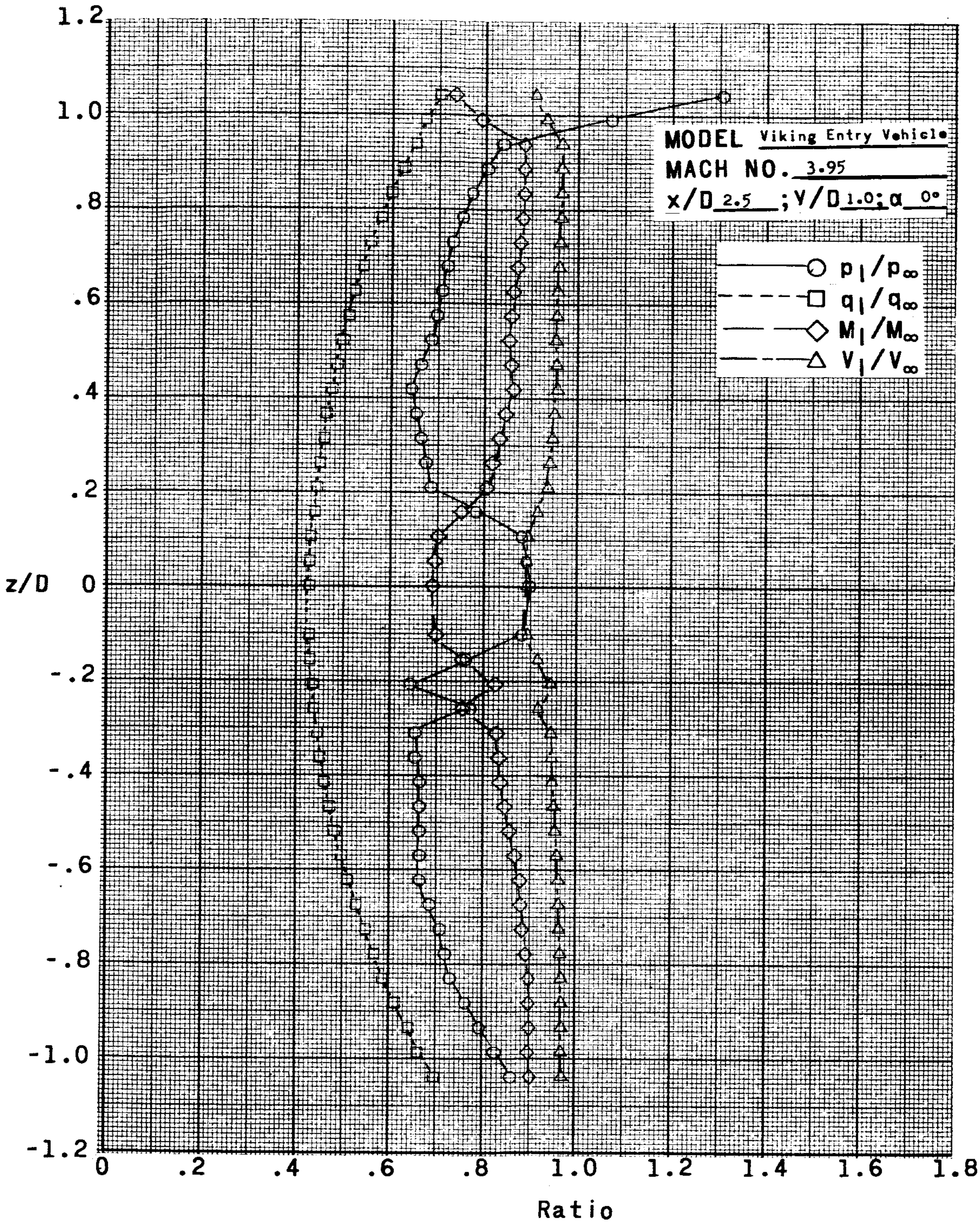
(e) x/D = 2.5; y/D = 2.0; α = 0°.

Figure 8.- Continued.



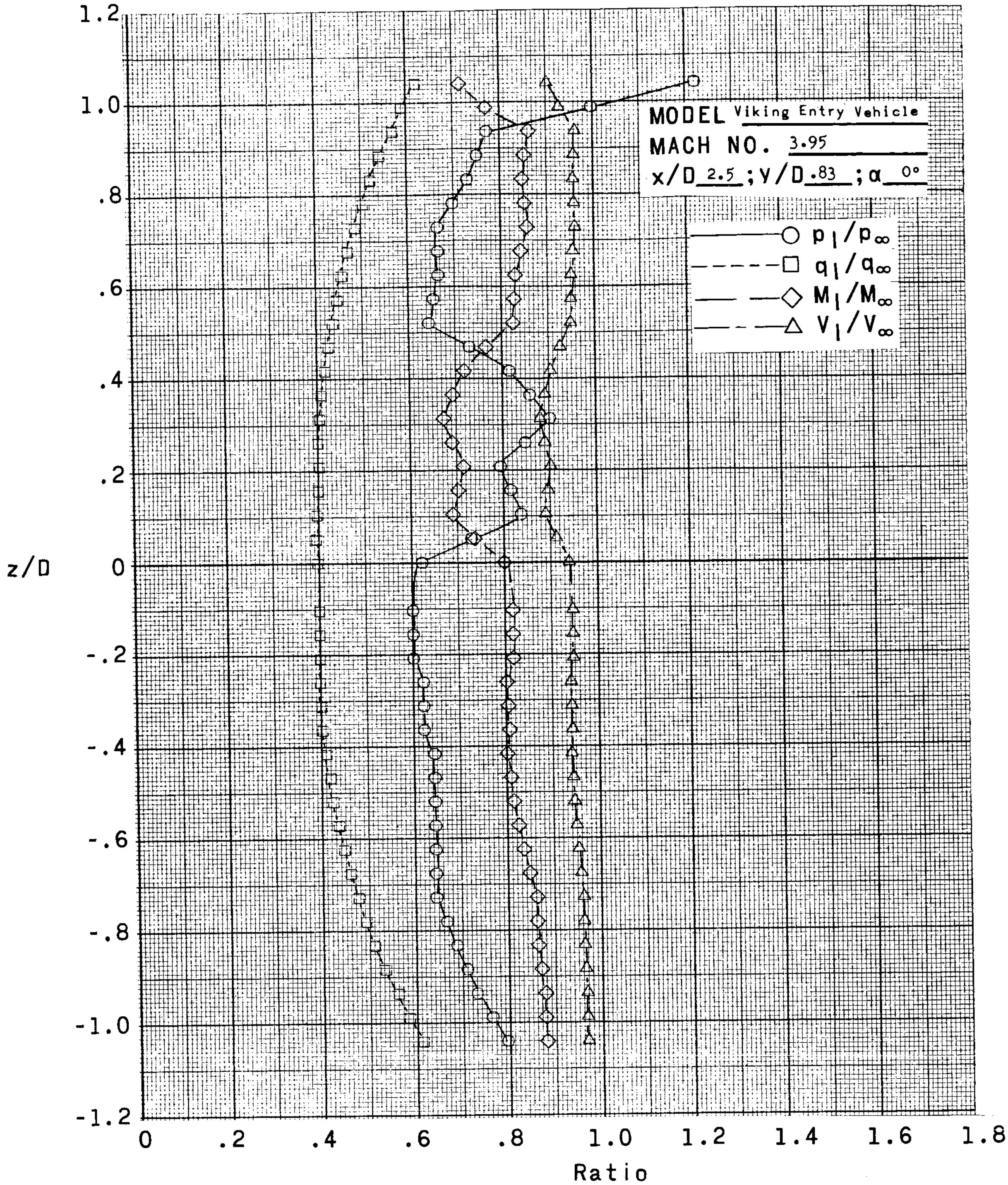
(f) x/D = 2.5; y/D = 1.5; α = 0°.

Figure 8.- Continued.



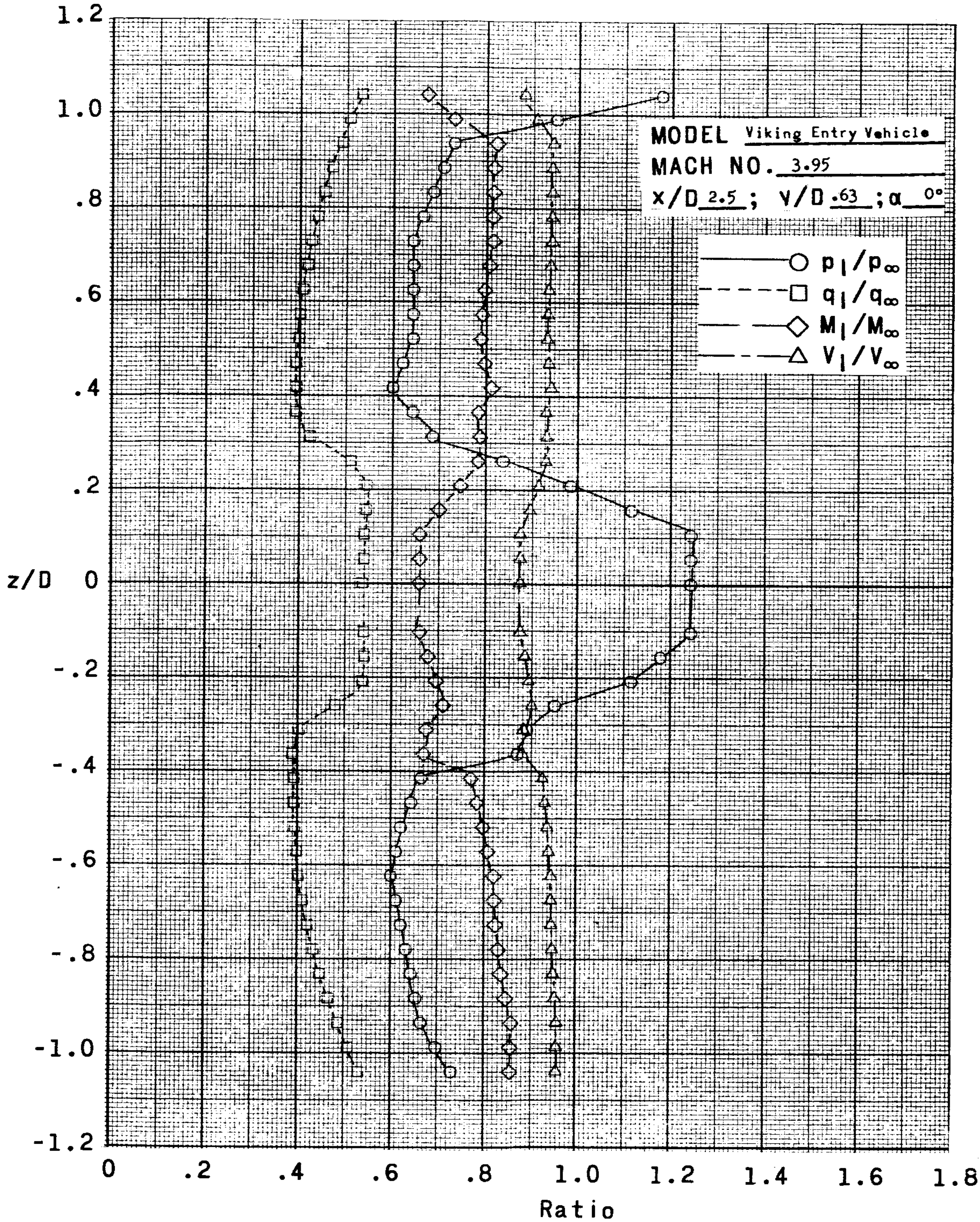
(g) $x/D = 2.5$; $y/D = 1.0$; $\alpha = 0^{o}$.

Figure 8.- Continued.



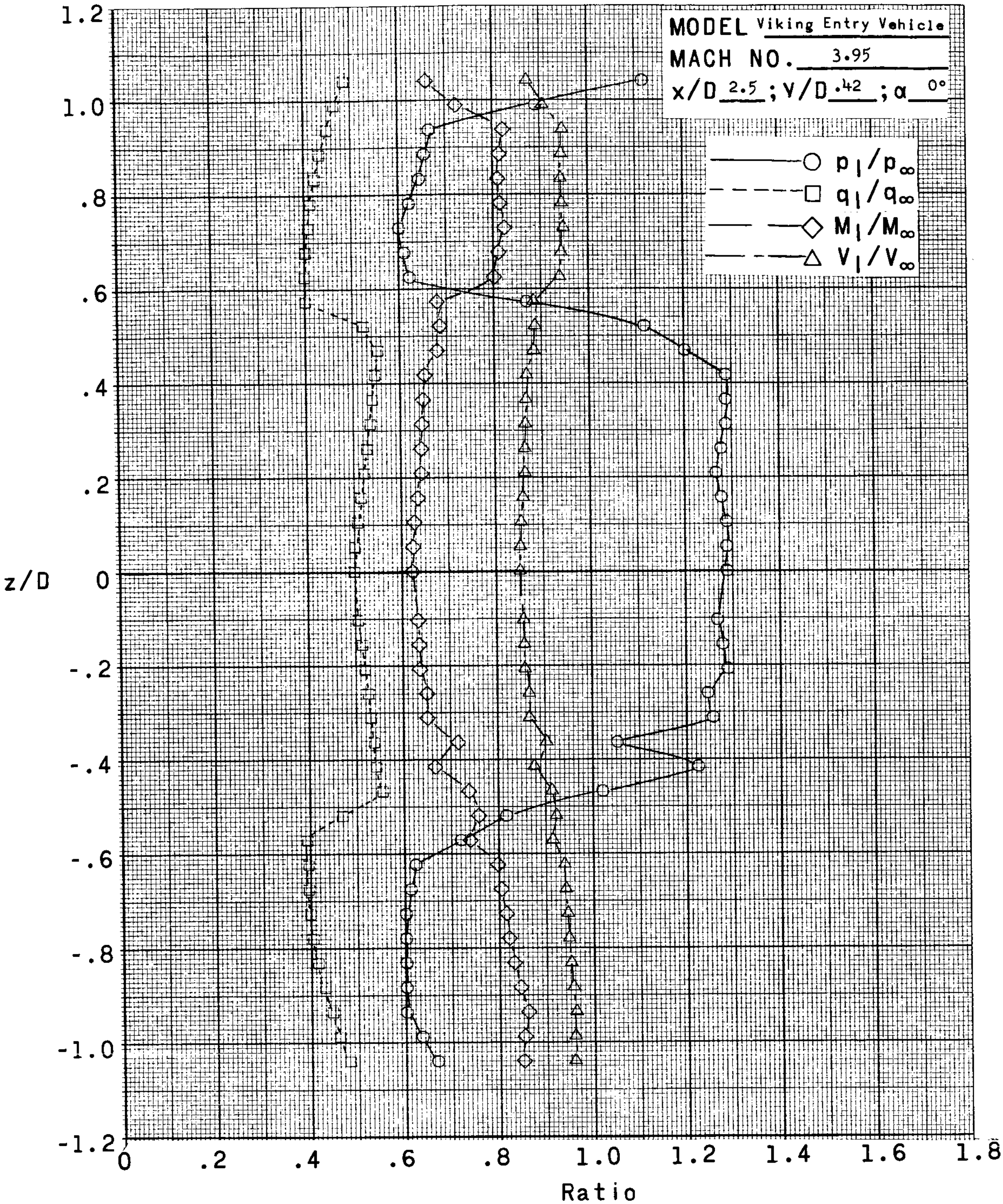
(h) x/D = 2.5; y/D = 0.83; α = 0°.

Figure 8.- Continued.



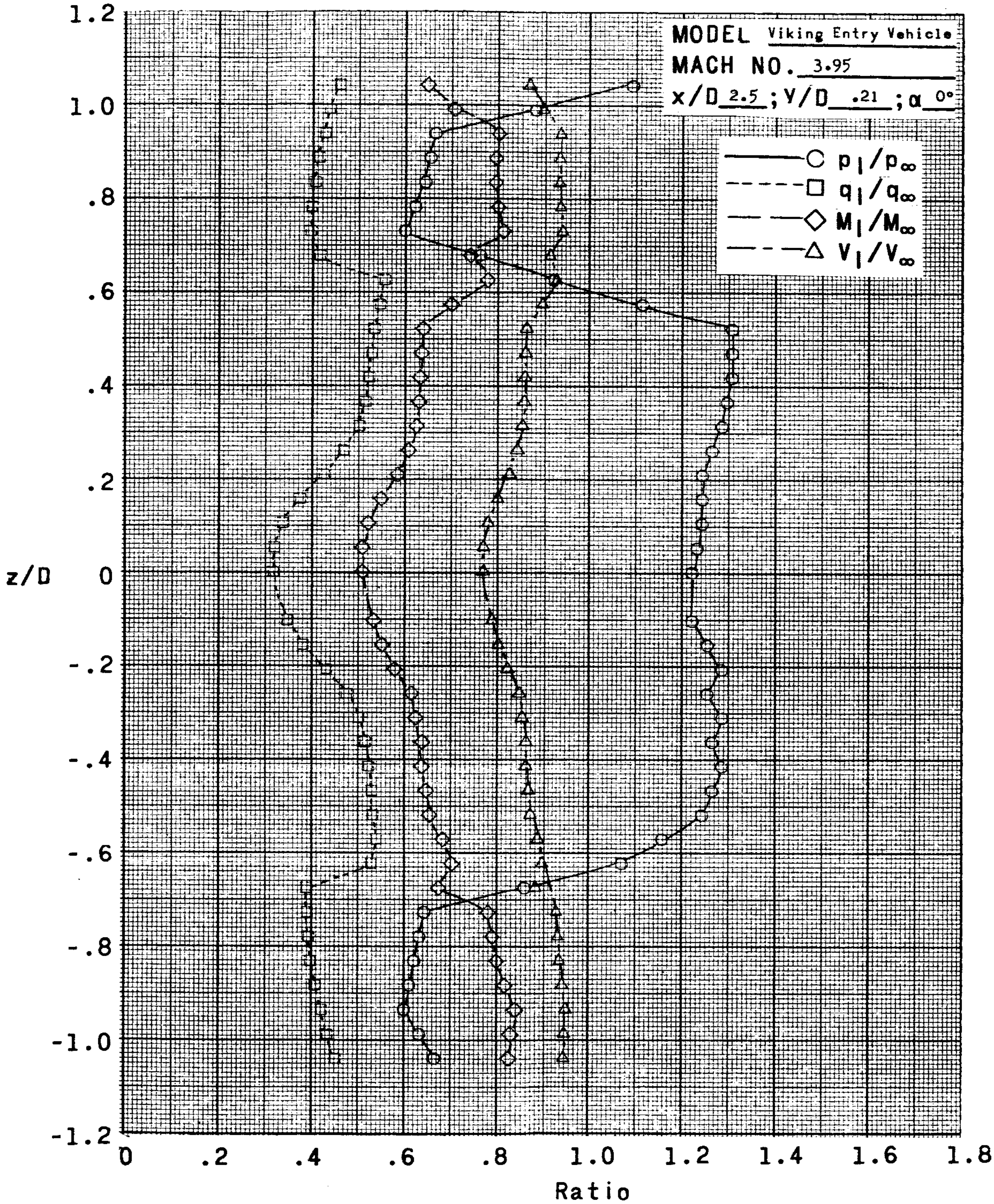
(i) $x/D = 2.5$; $y/D = 0.63$; $\alpha = 0^{0}$.

Figure 8.- Continued.



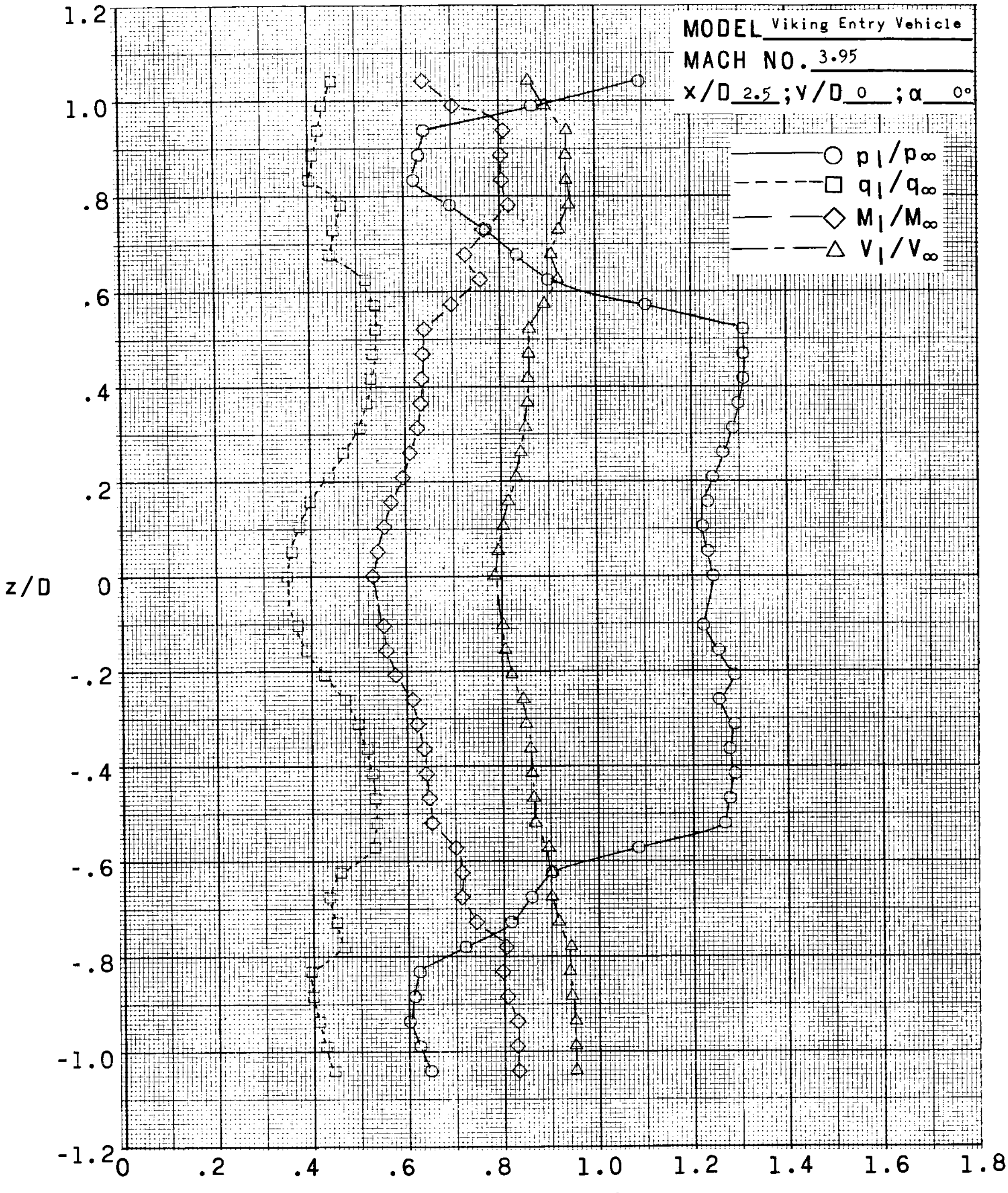
(j) $x/D = 2.5$; $y/D = 0.42$; $\alpha = 0^{0}$.

Figure 8.- Continued.



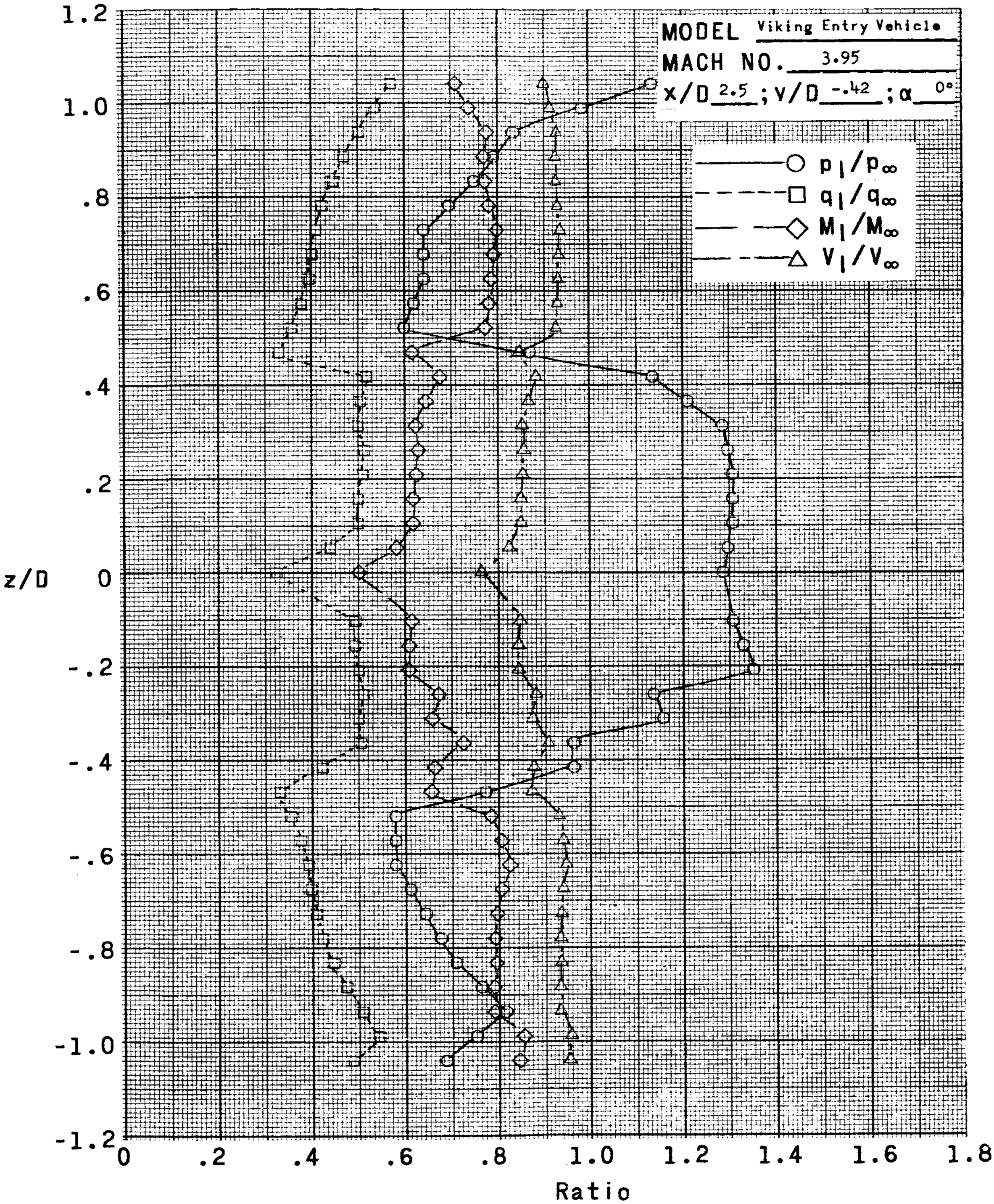
(k) $x/D = 2.5$; $y/D = 0.21$; $\alpha = 0^0$.

Figure 8.- Continued.



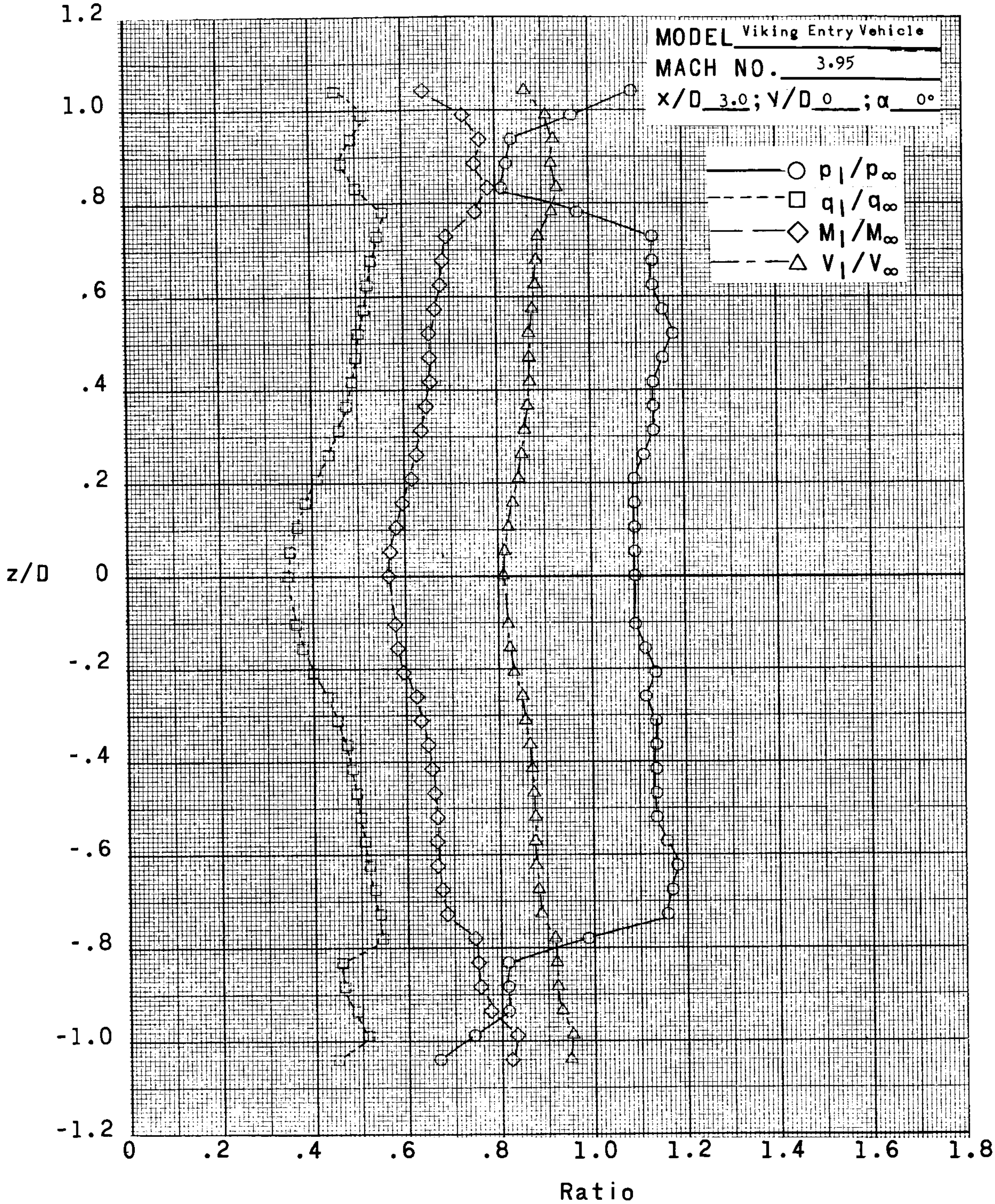
(l) $x/D = 2.5$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



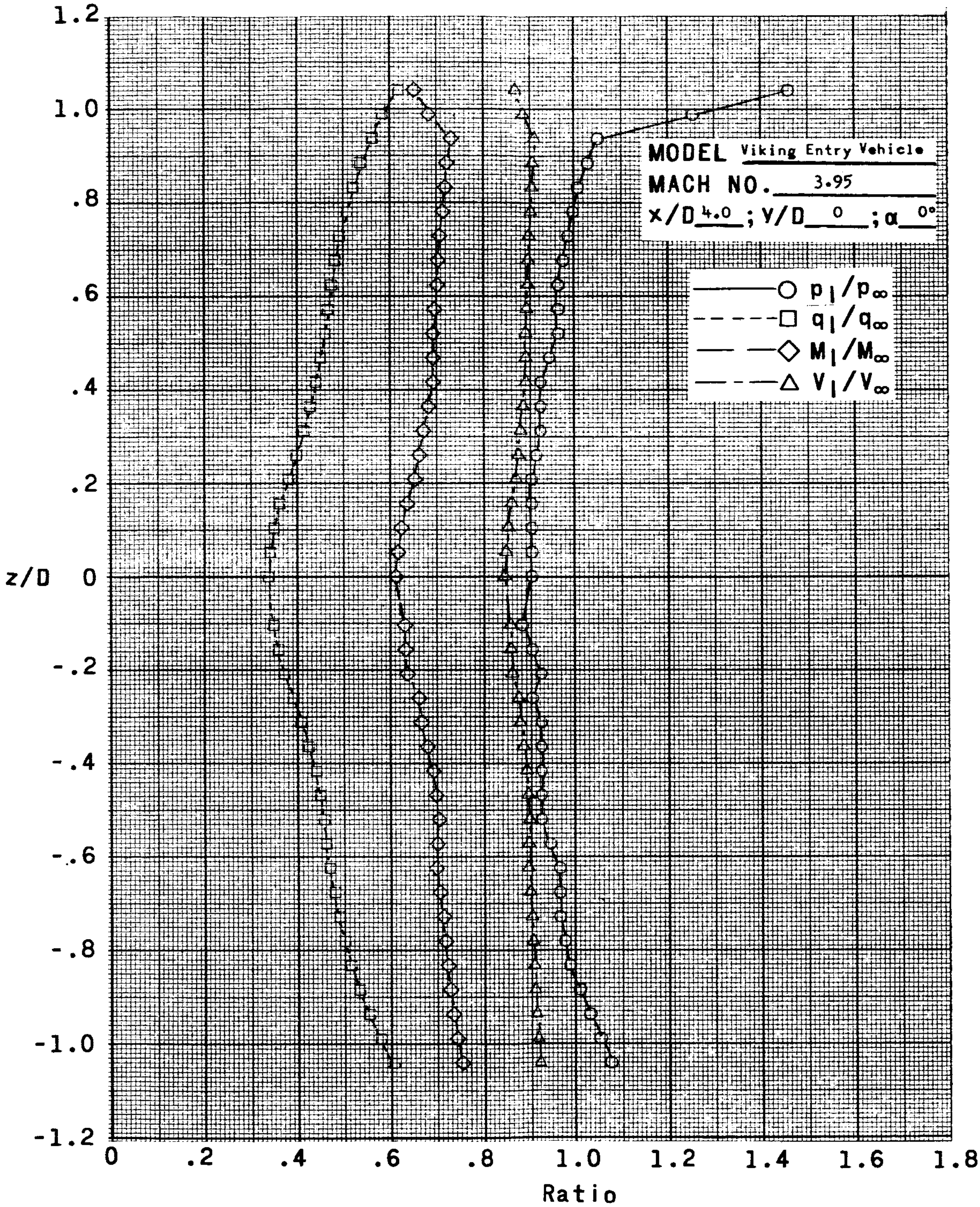
(m) $x/D = 2.5$; $y/D = -0.42$; $\alpha = 0^{\circ}$.

Figure 8.- Continued.



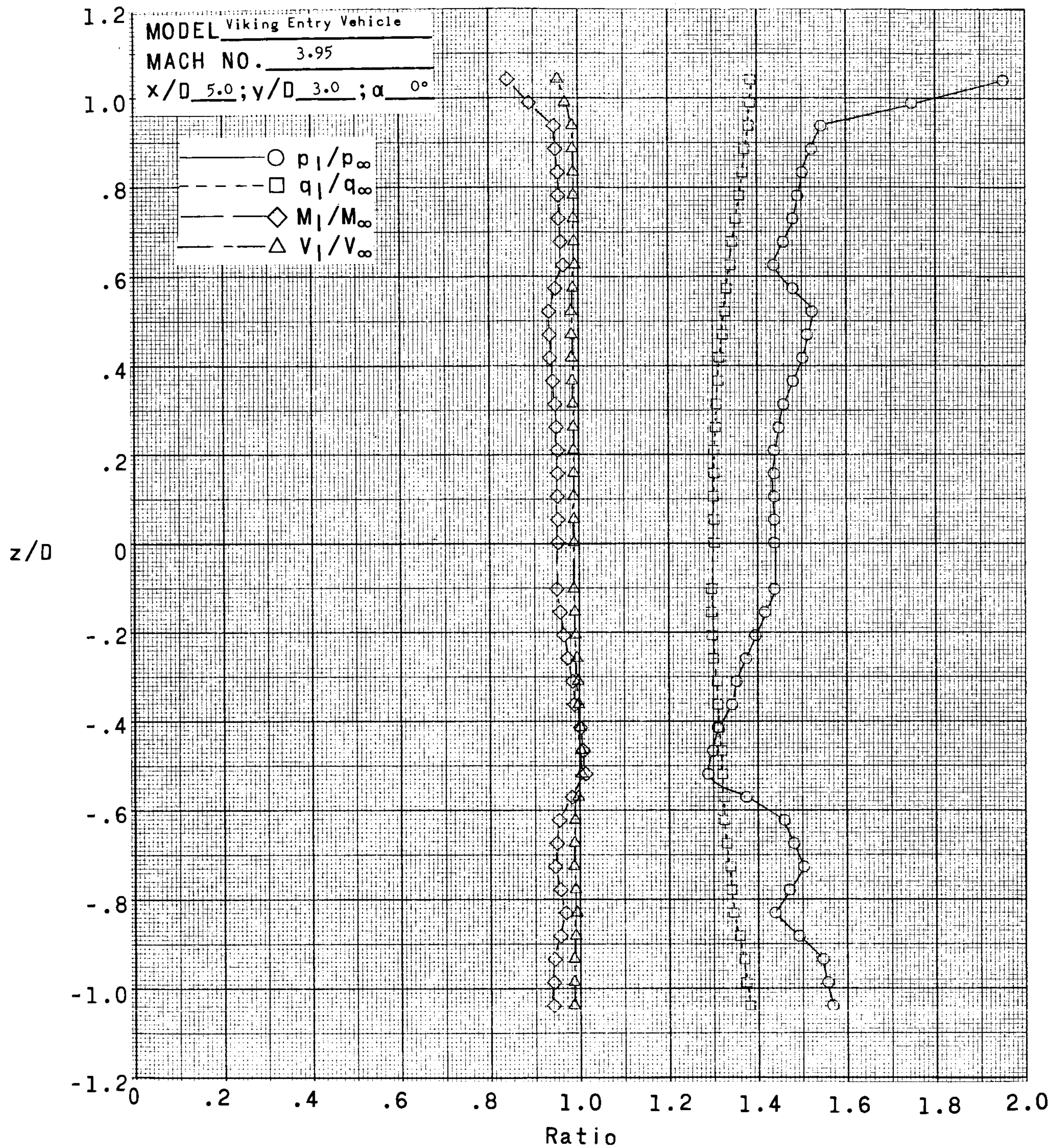
(n) x/D = 3.0; y/D = 0; α = 0°.

Figure 8.- Continued.



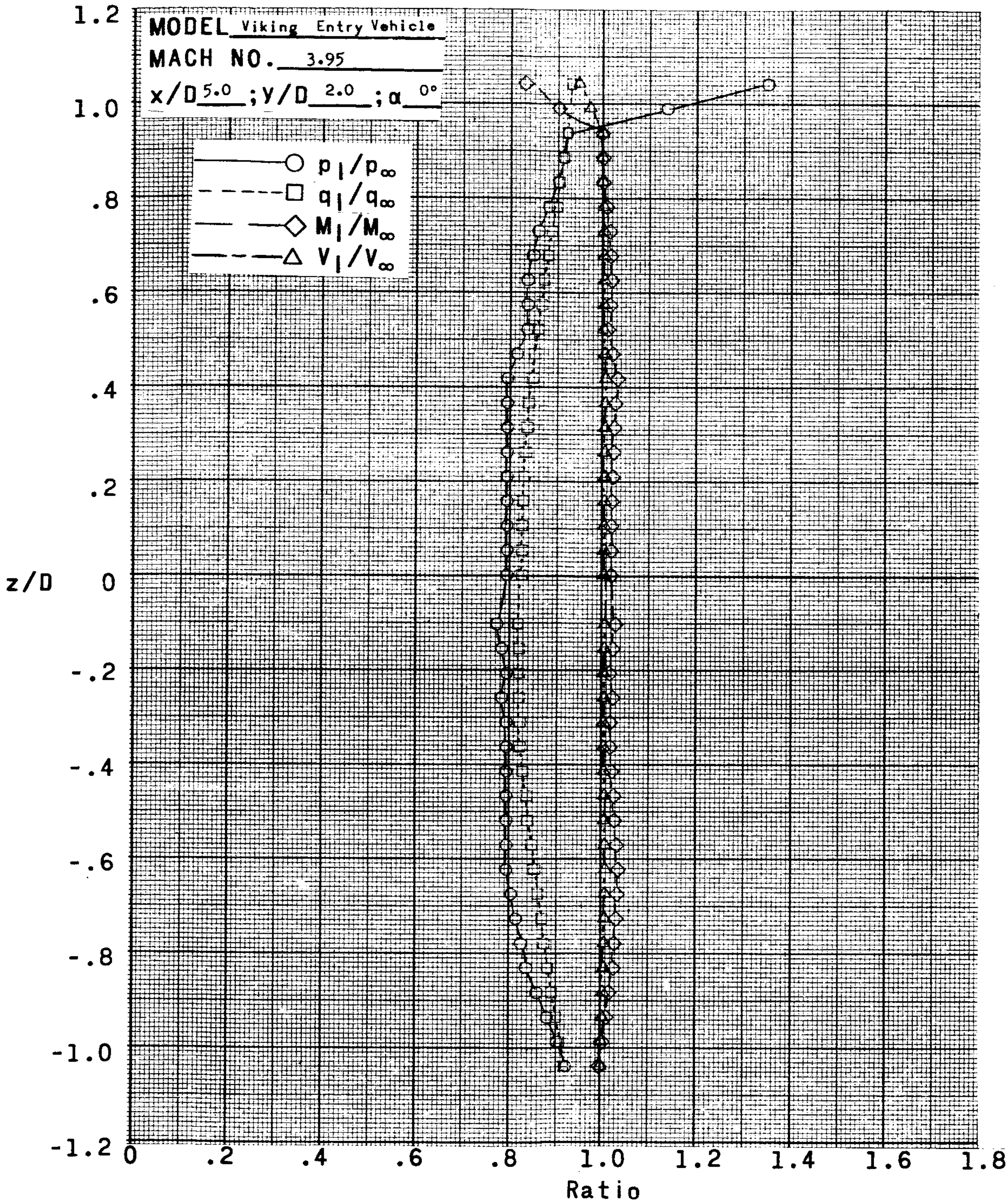
(o) $x/D = 4.0$; $y/D = 0$; $\alpha = 0^{\circ}$.

Figure 8.- Continued.



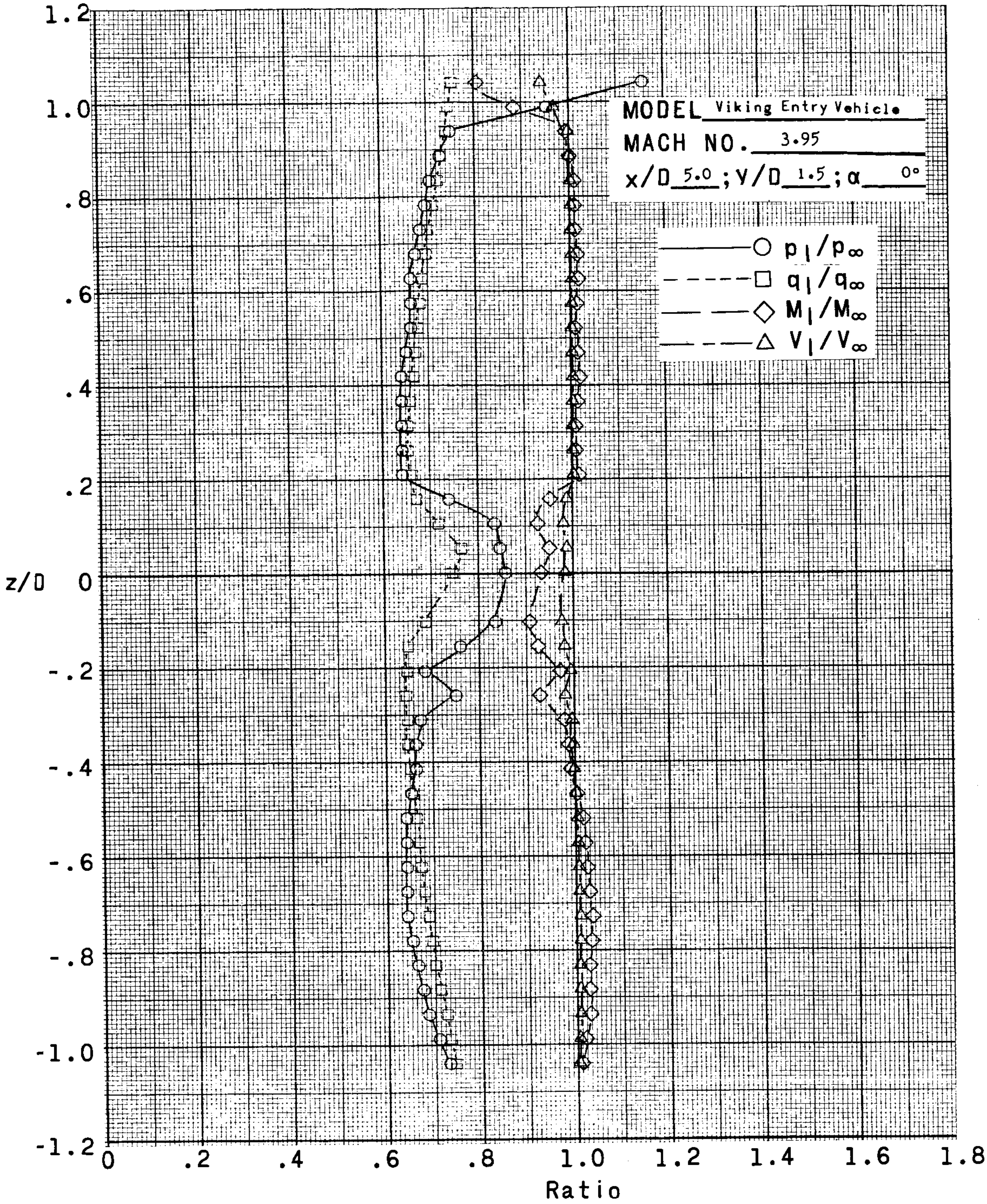
(p) x/D = 5.0; y/D = 3.0; α = 0°.

Figure 8.- Continued.



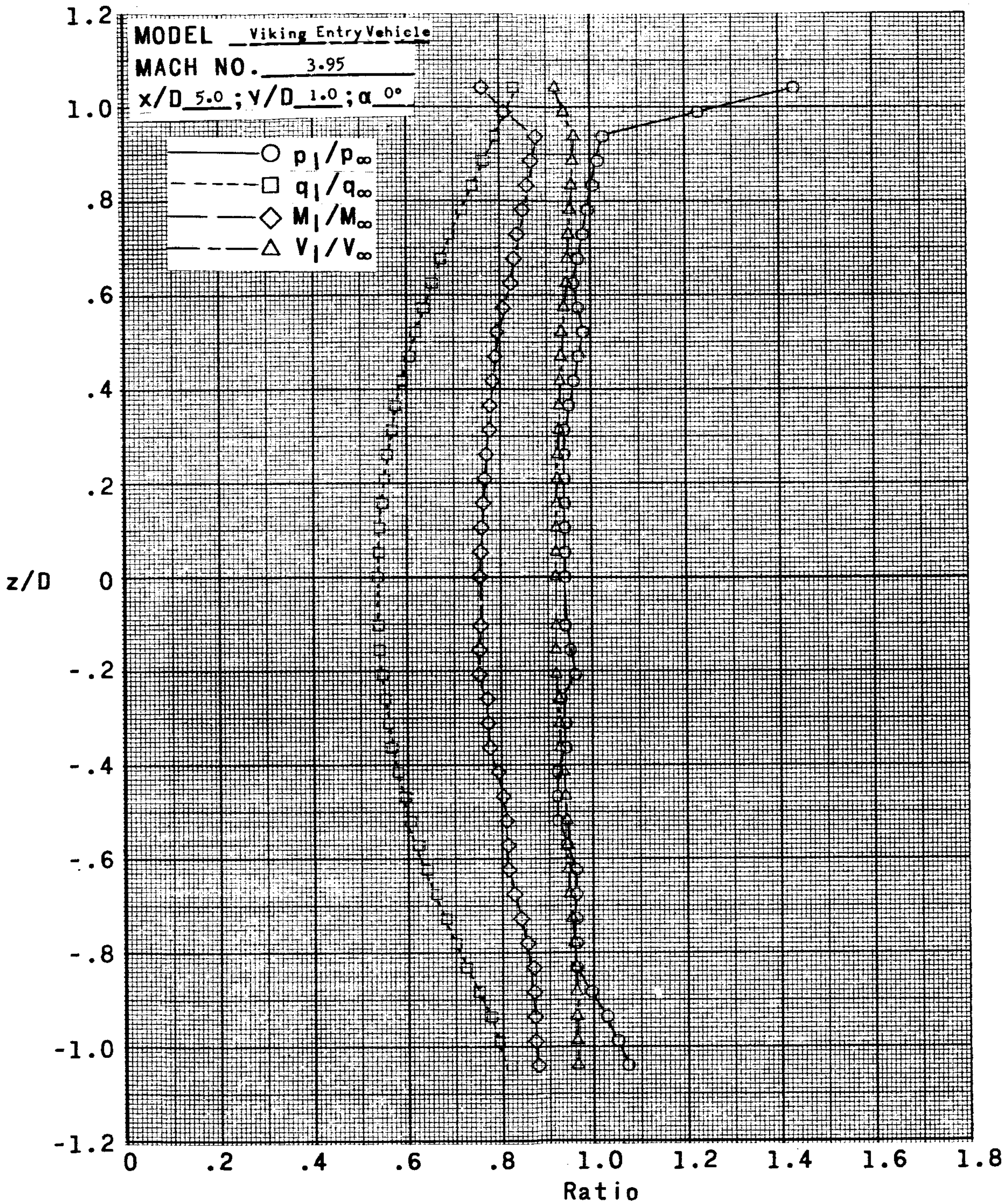
(q) $x/D = 5.0$; $y/D = 2.0$; $\alpha = 0^{0}$.

Figure 8.- Continued.



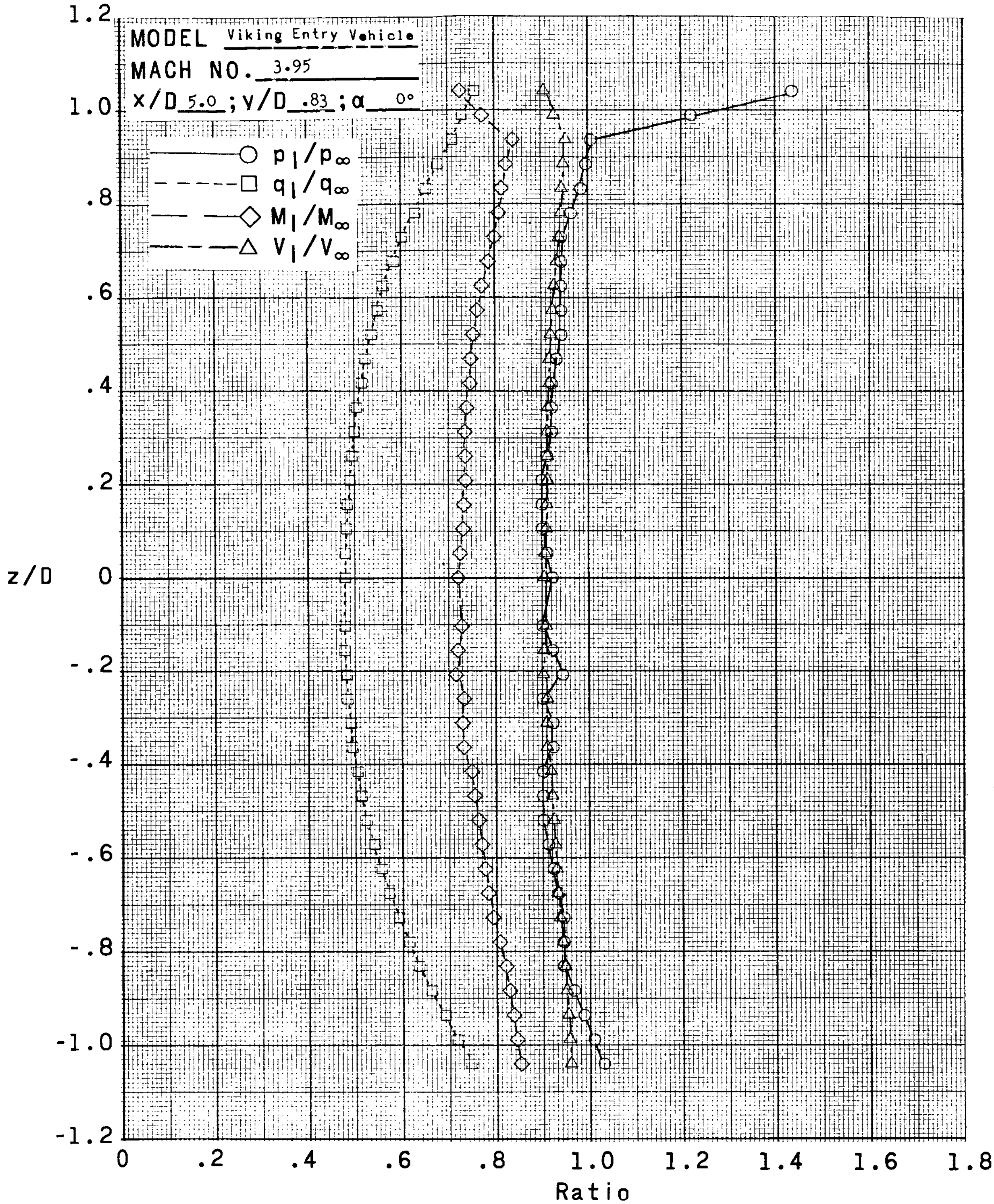
(r) $x/D = 5.0$; $y/D = 1.5$; $\alpha = 0^{0}$.

Figure 8.- Continued.



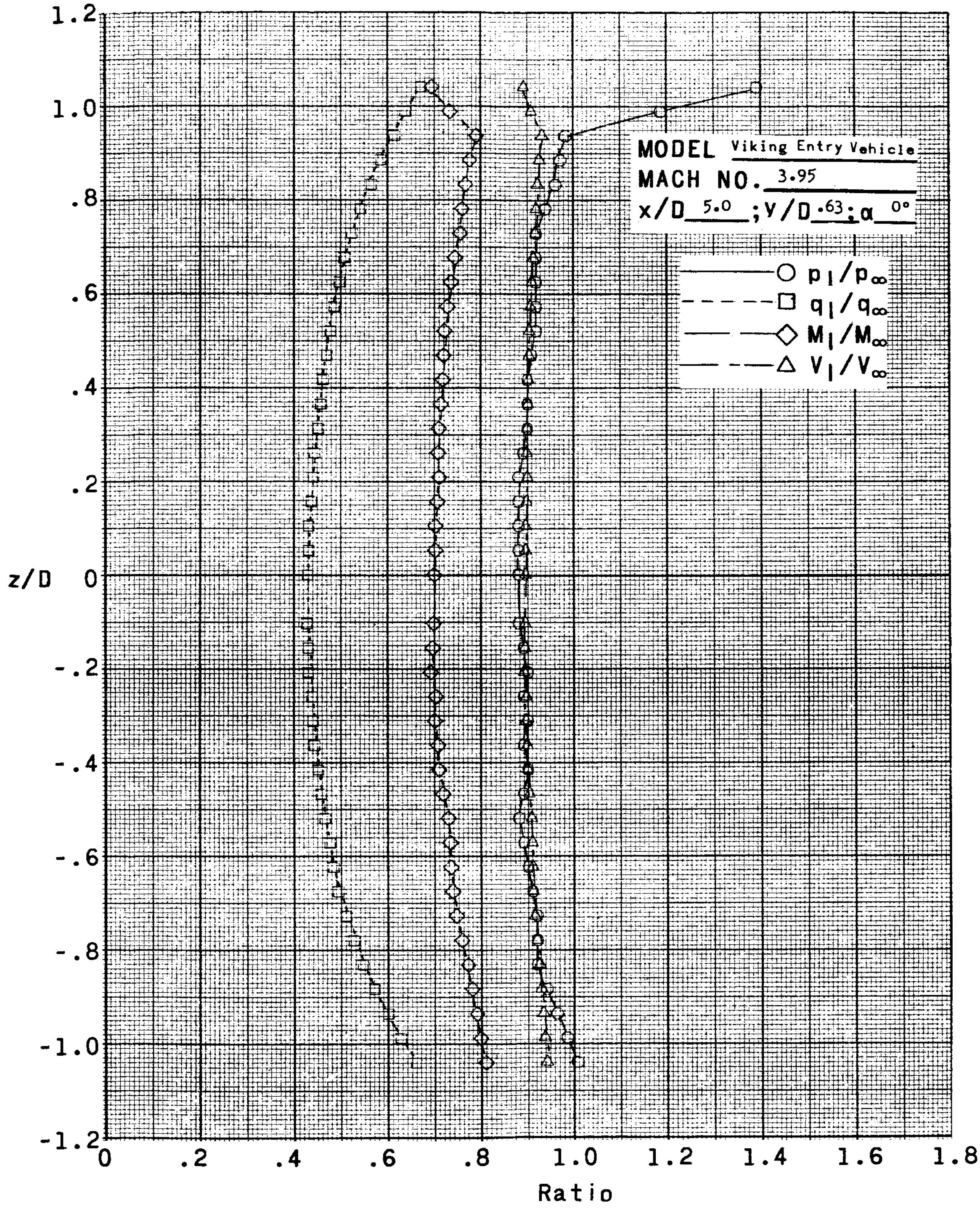
(s) $x/D = 5.0$; $y/D = 1.0$; $\alpha = 0^{0}$.

Figure 8.- Continued.



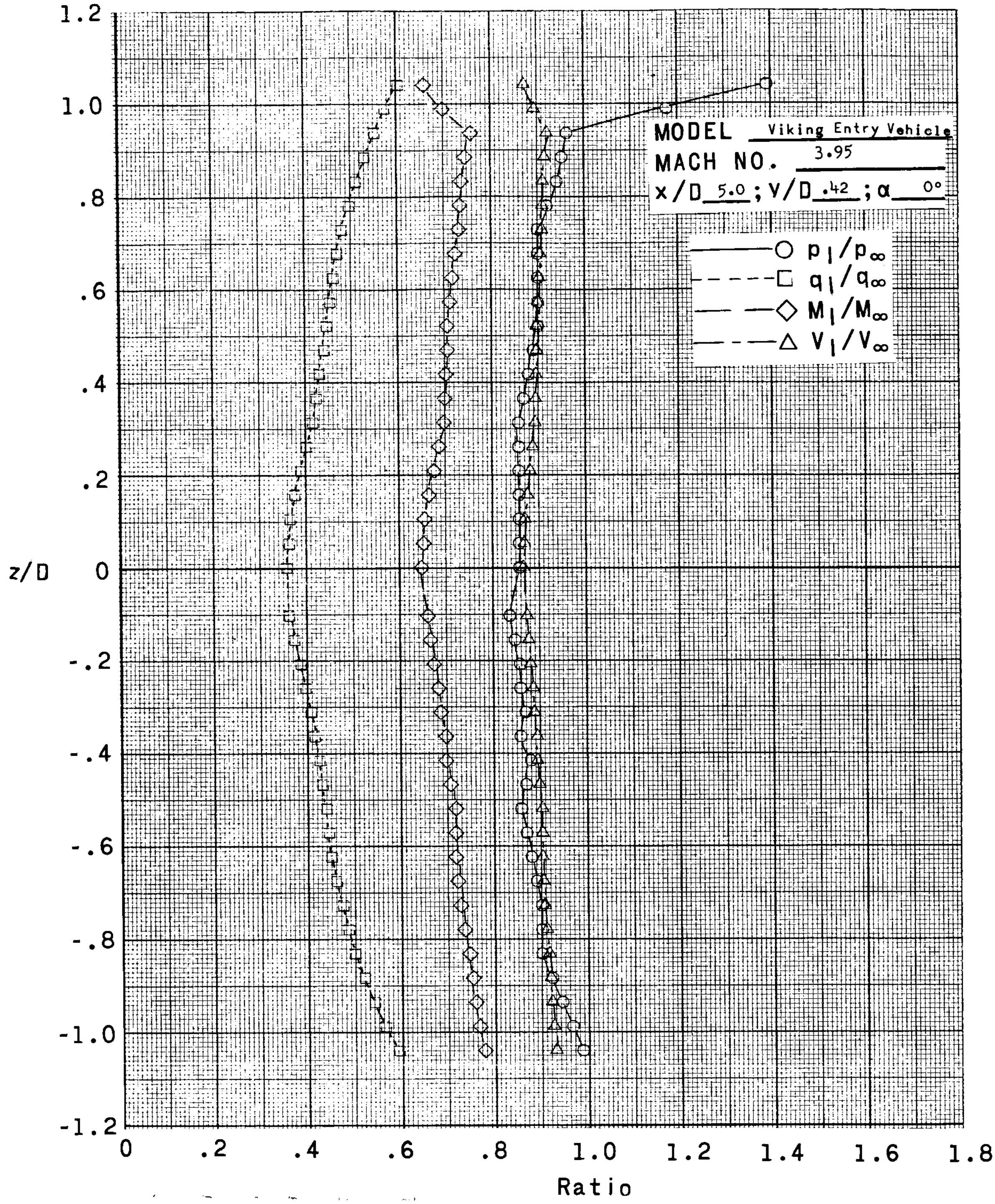
(t) x/D = 5.0; y/D = 0.83; α = 0°.

Figure 8.- Continued.



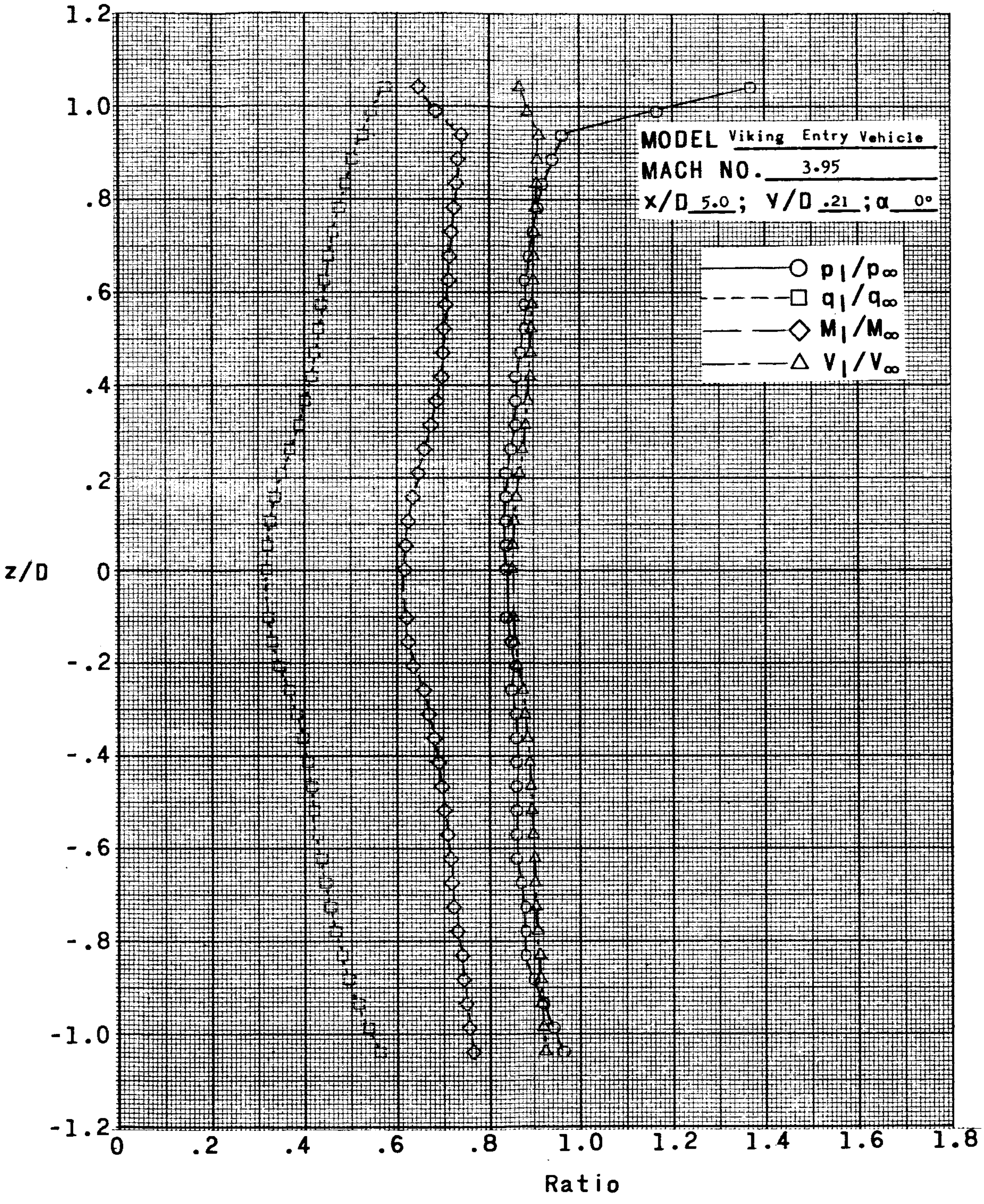
(u) $x/D = 5.0$; $y/D = 0.63$; $\alpha = 0^0$.

Figure 8.- Continued.



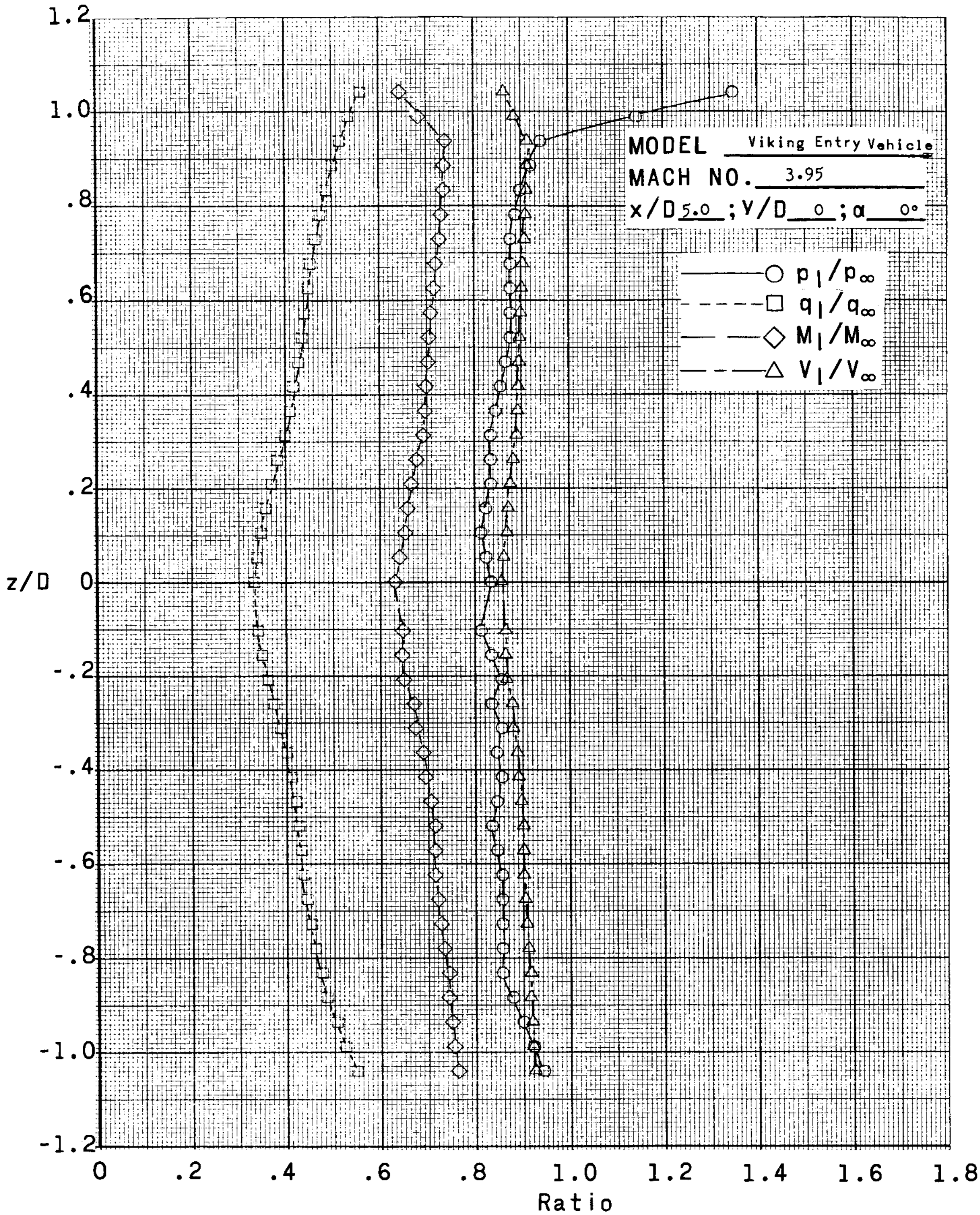
(v) $x/D = 5.0$; $y/D = 0.42$; $\alpha = 0^0$.

Figure 8.- Continued.



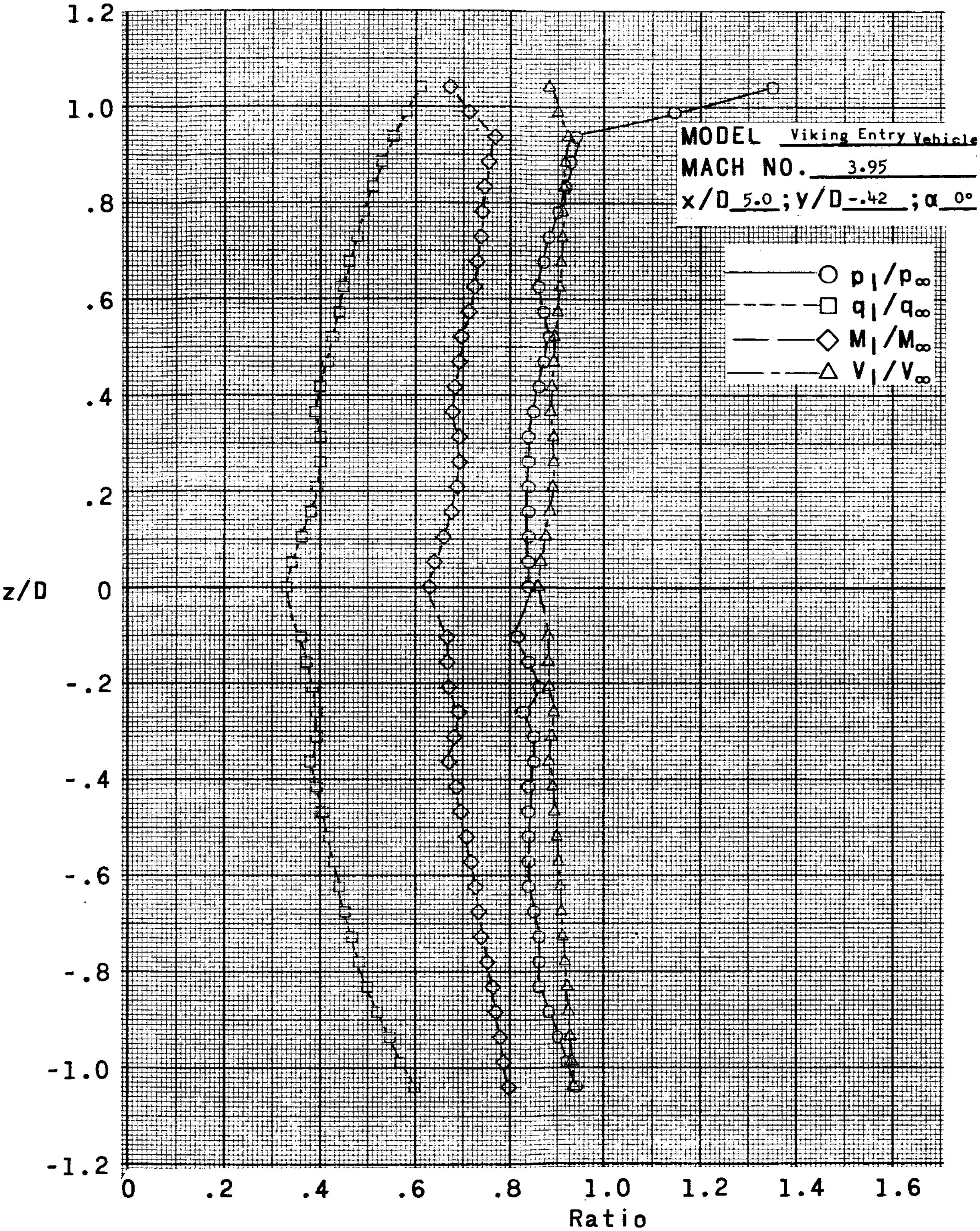
(w) $x/D = 5.0$; $y/D = 0.21$; $\alpha = 0^{o}$.

Figure 8.- Continued.



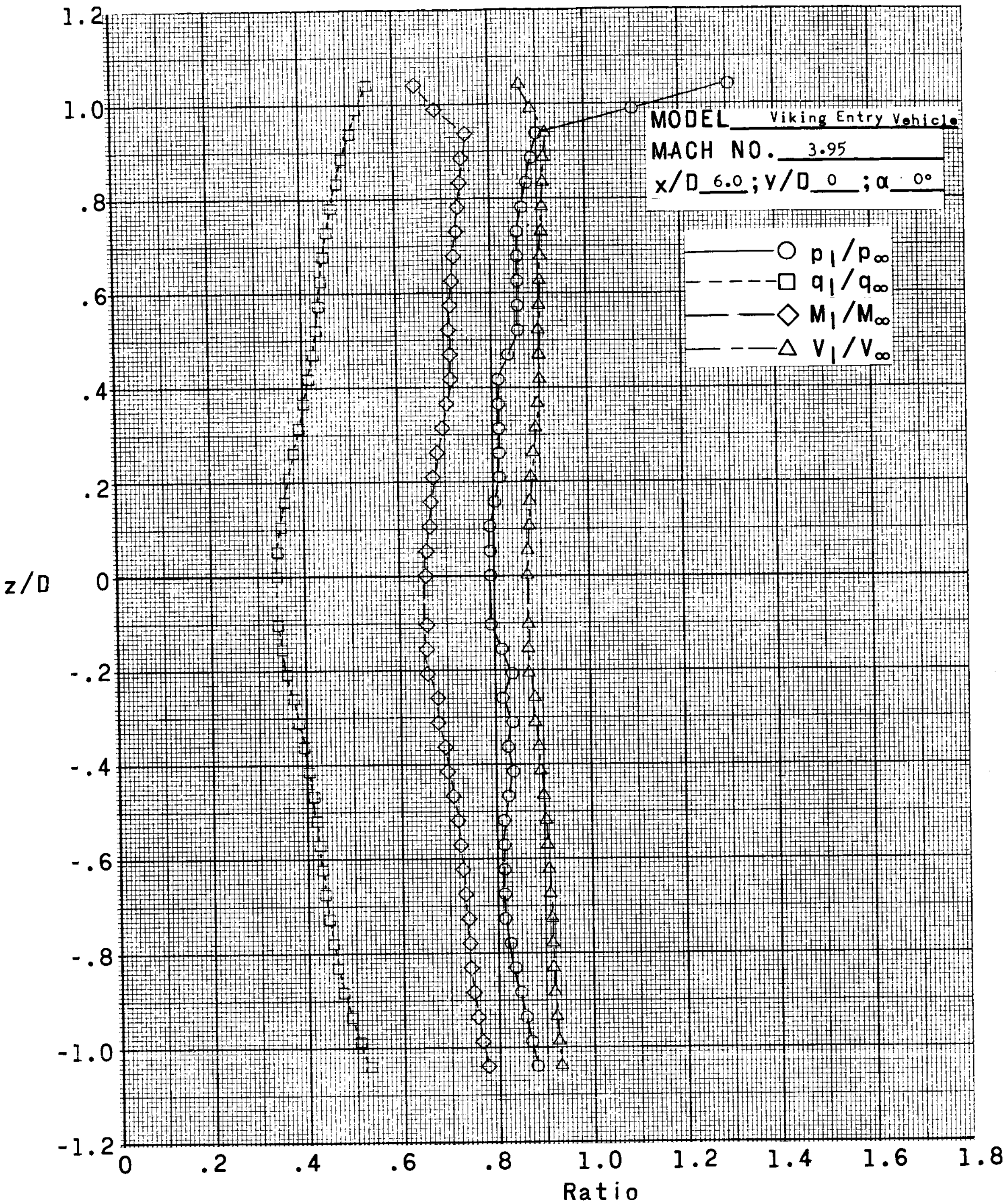
(x) $x/D = 5.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



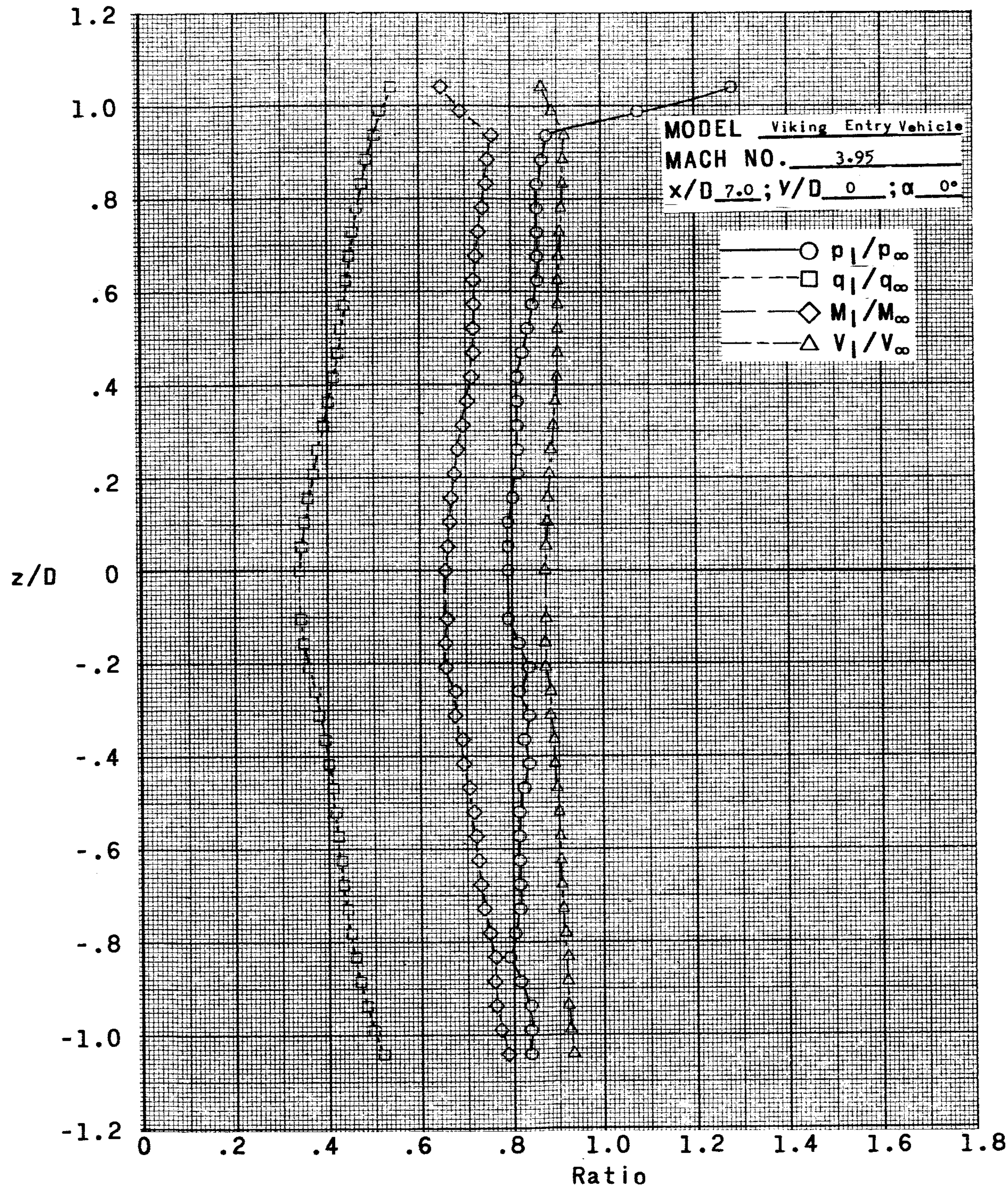
(y) $x/D = 5.0$; $y/D = -0.42$; $\alpha = 0^o$.

Figure 8.- Continued.



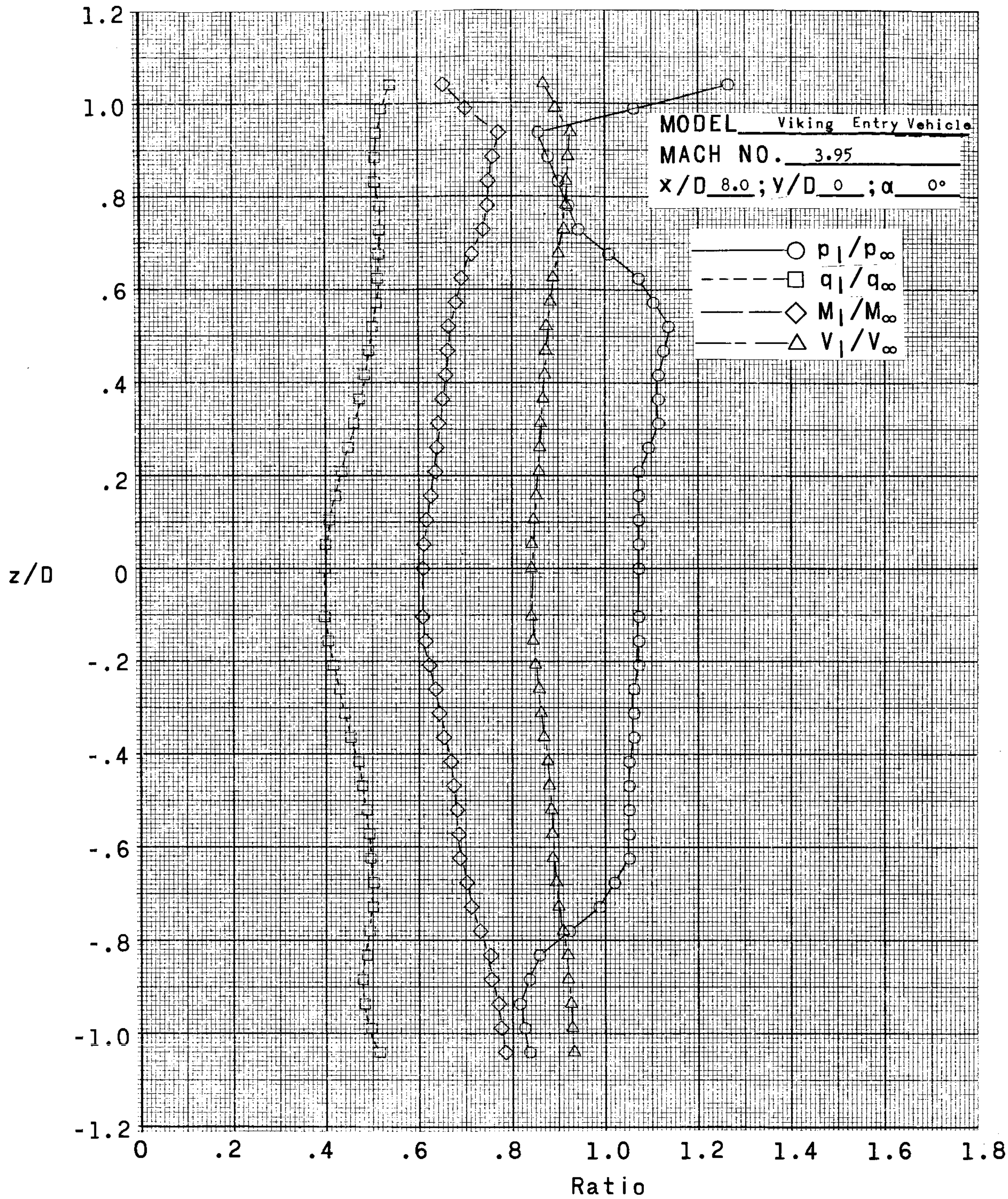
(z) $x/D = 6.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



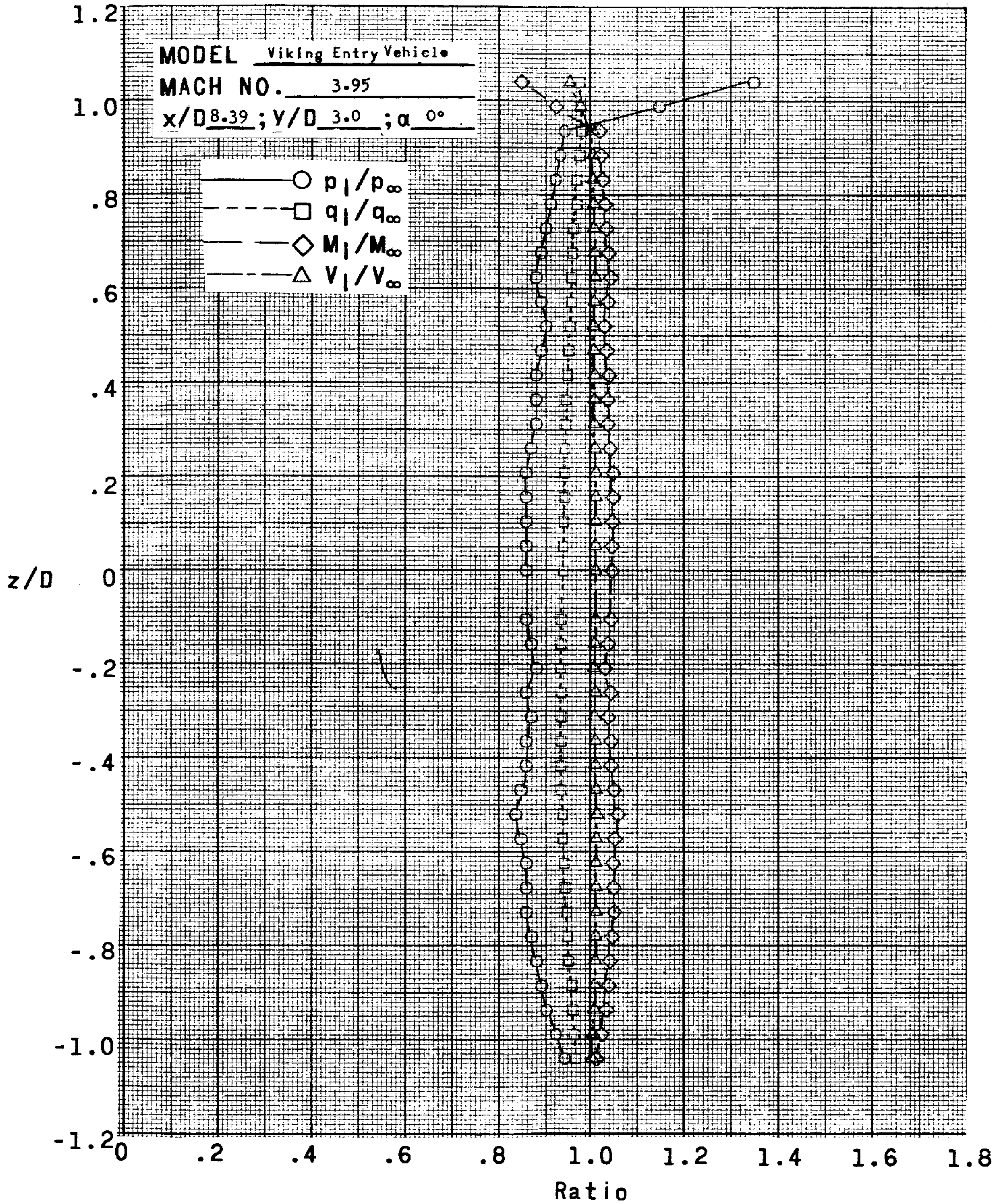
(aa) $x/D = 7.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



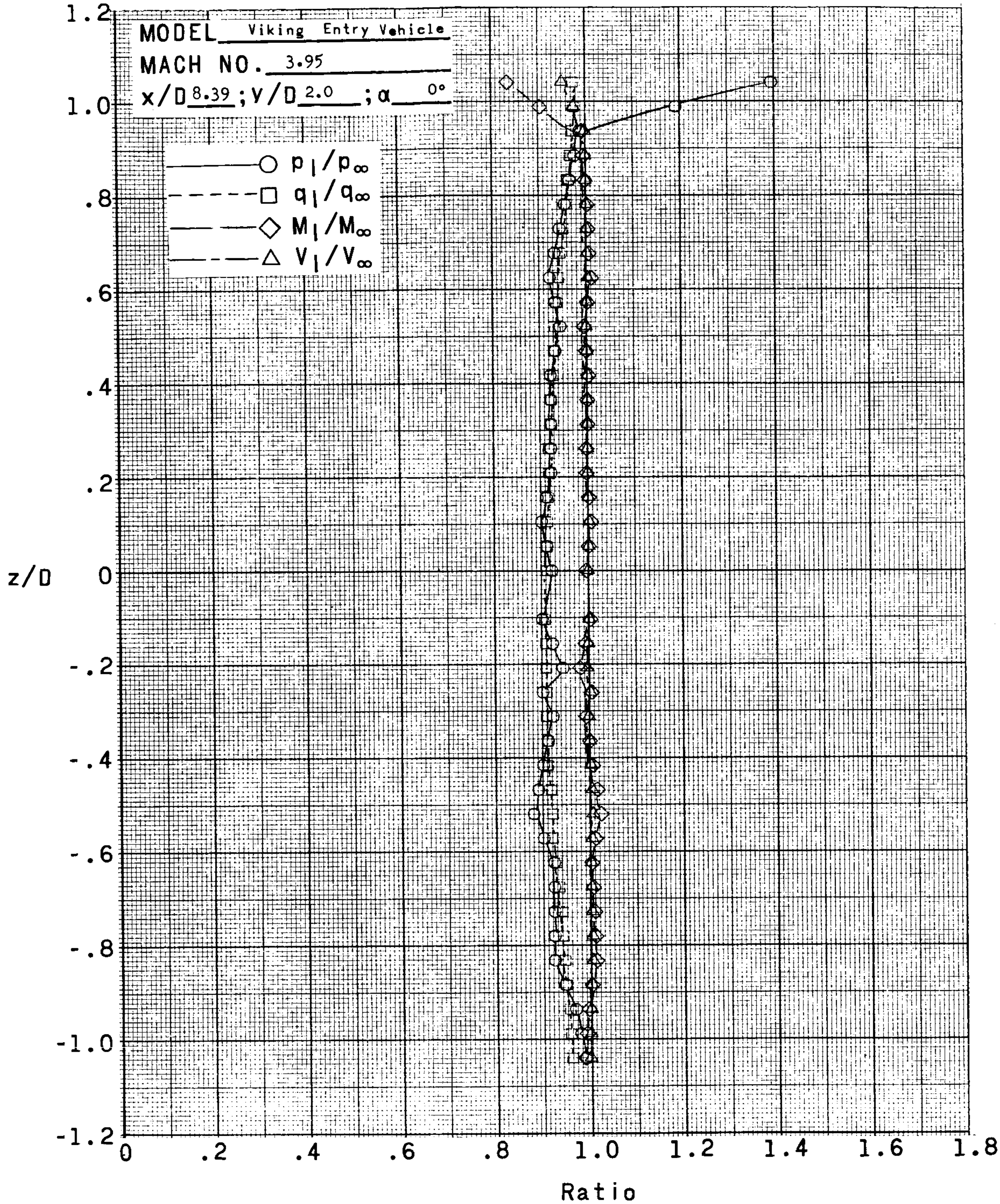
(bb) $x/D = 8.0$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



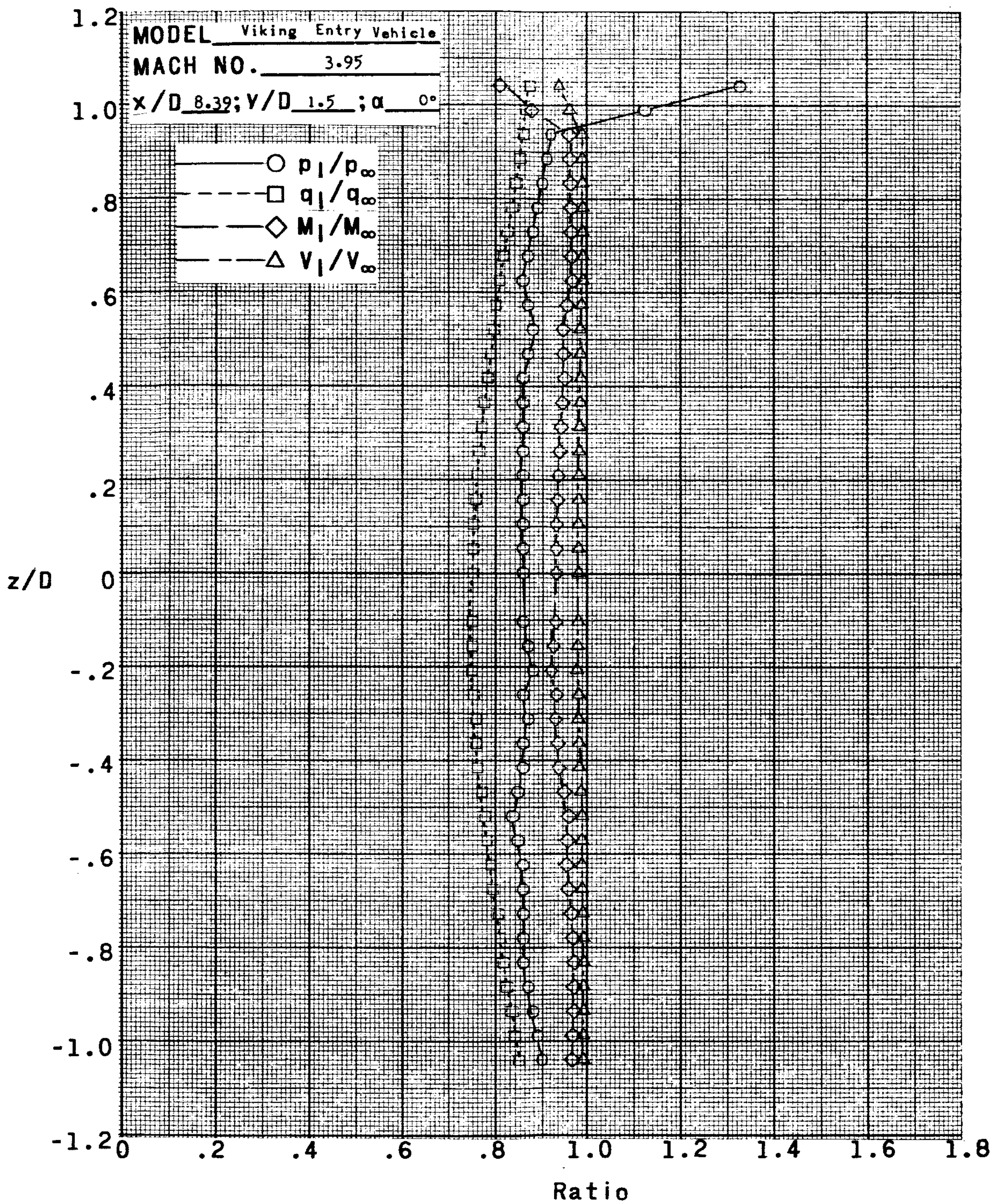
(cc) x/D = 8.39; y/D = 3.0; α = 0°.

Figure 8.- Continued.



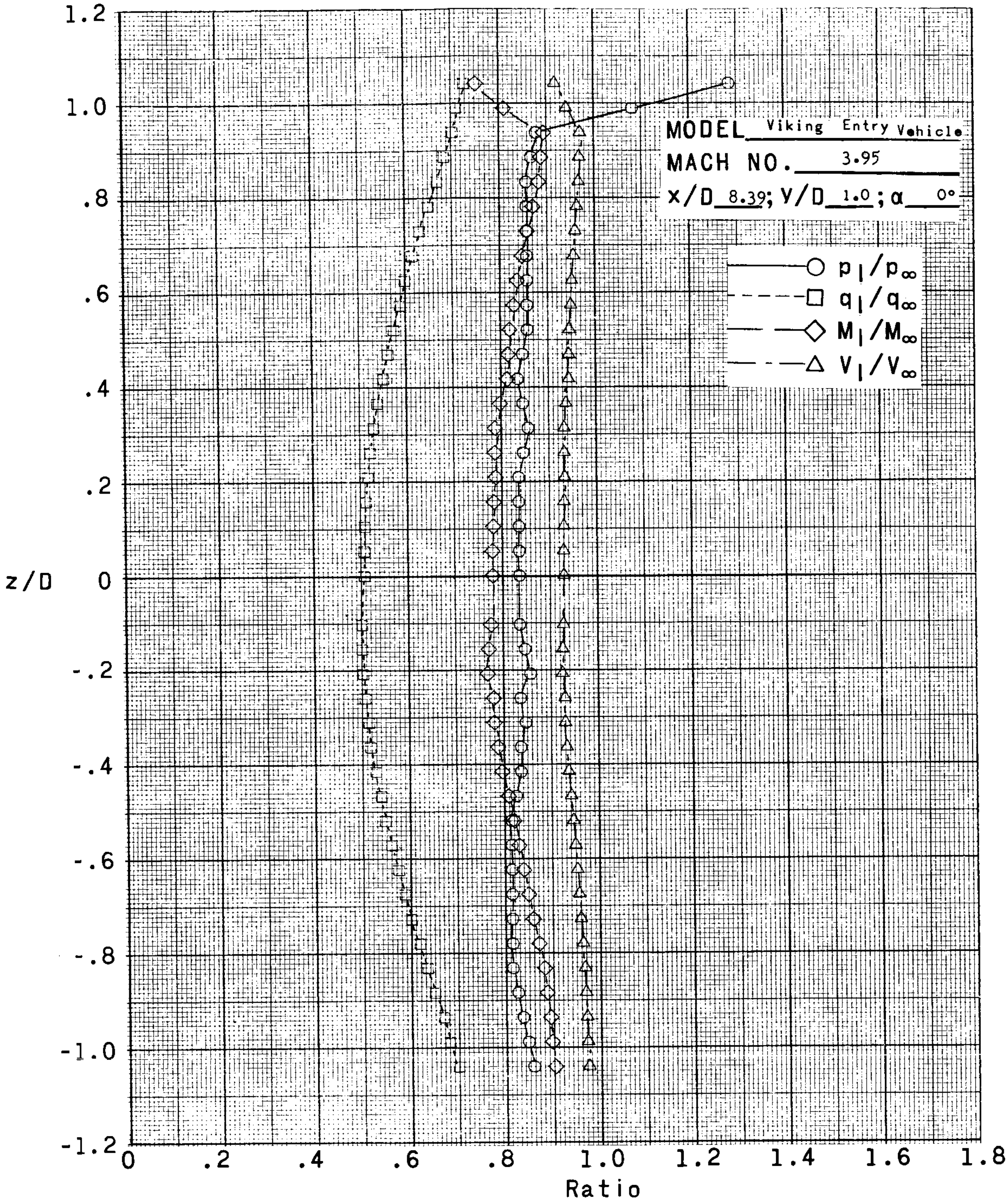
(dd) $x/D = 8.39$; $y/D = 2.0$; $\alpha = 0^0$.

Figure 8.- Continued.



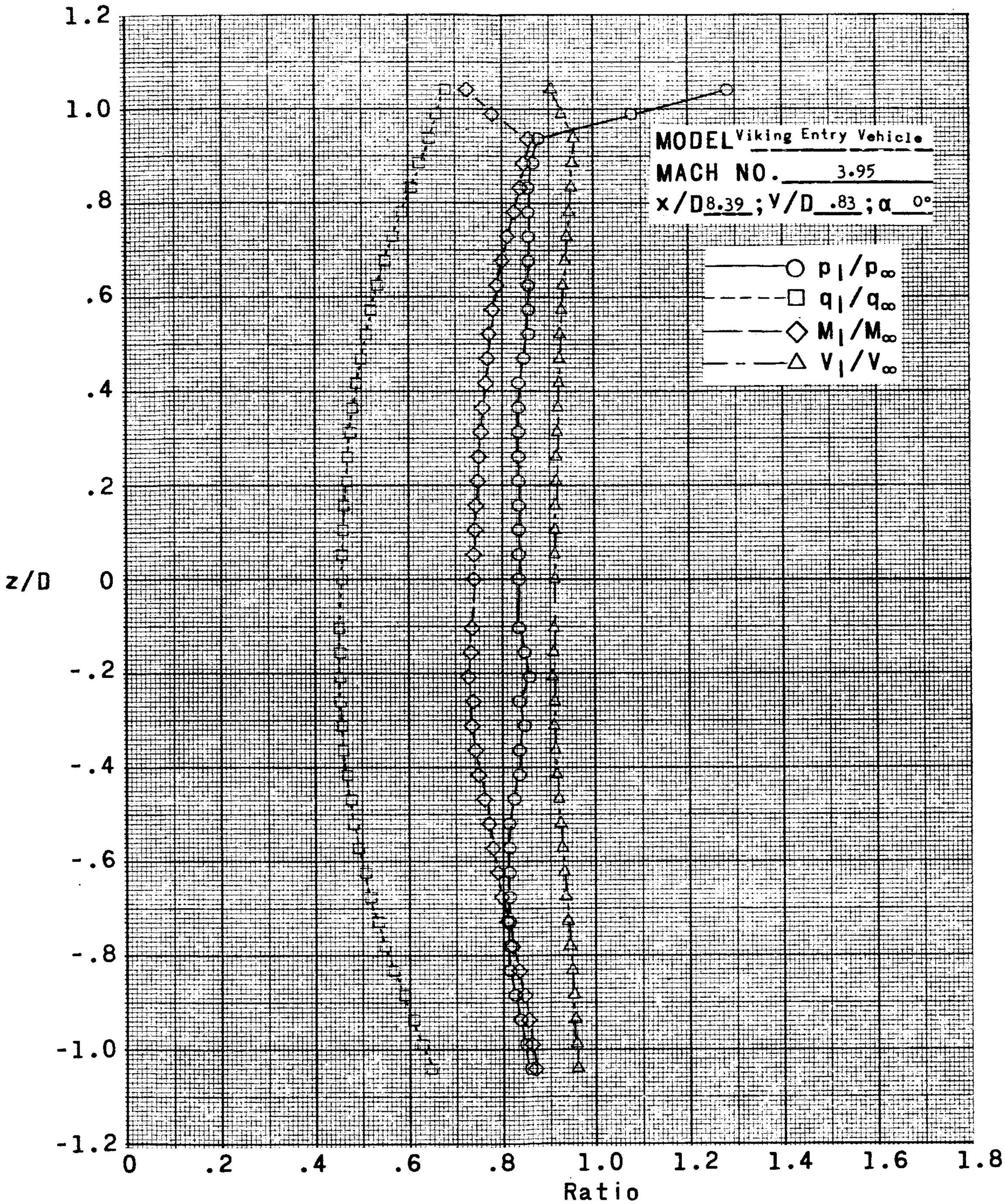
(ee) $x/D = 8.39$; $y/D = 1.5$; $\alpha = 0^0$.

Figure 8.- Continued.



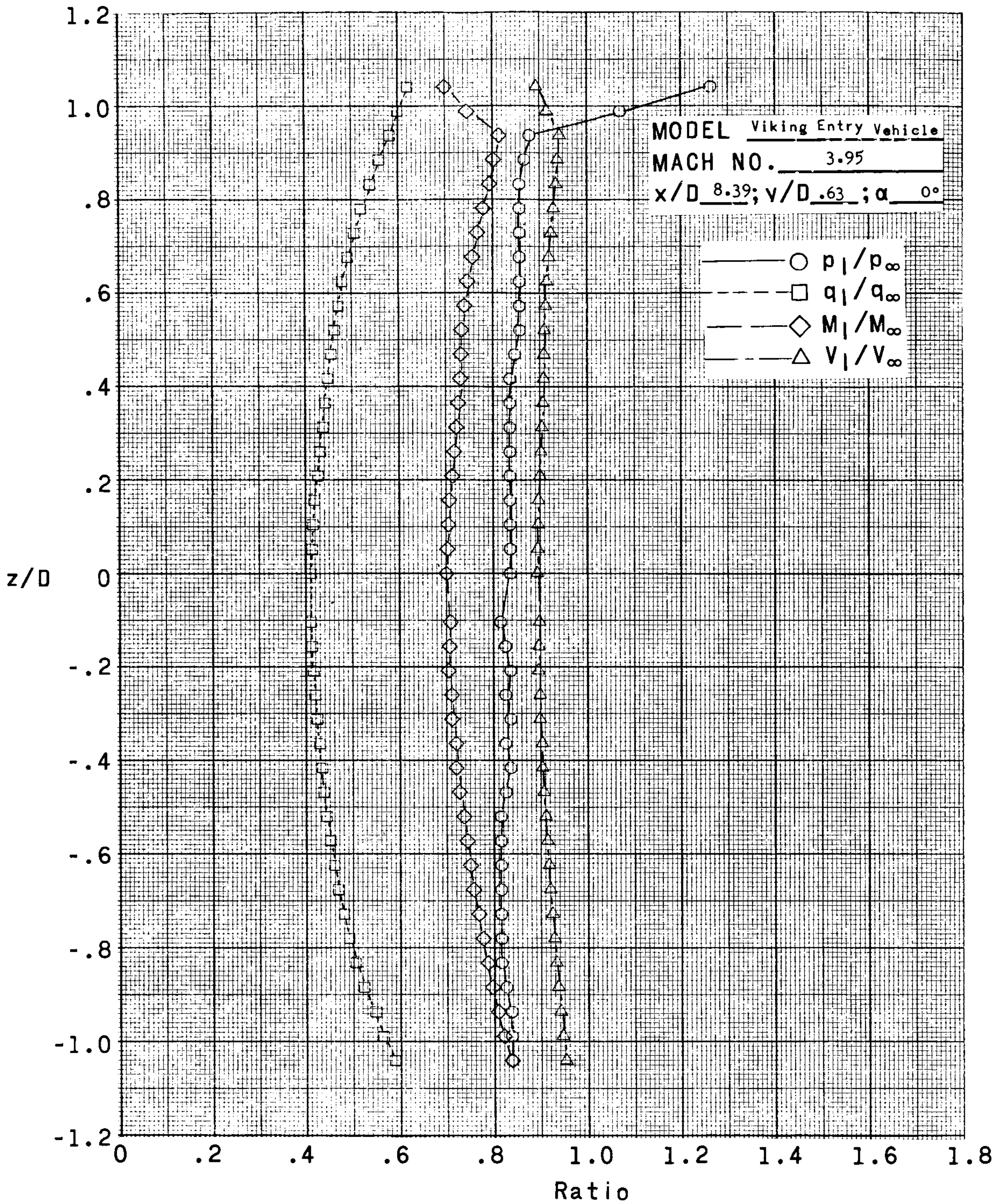
(ff) $x/D = 8.39$; $y/D = 1.0$; $\alpha = 0^0$.

Figure 8.- Continued.



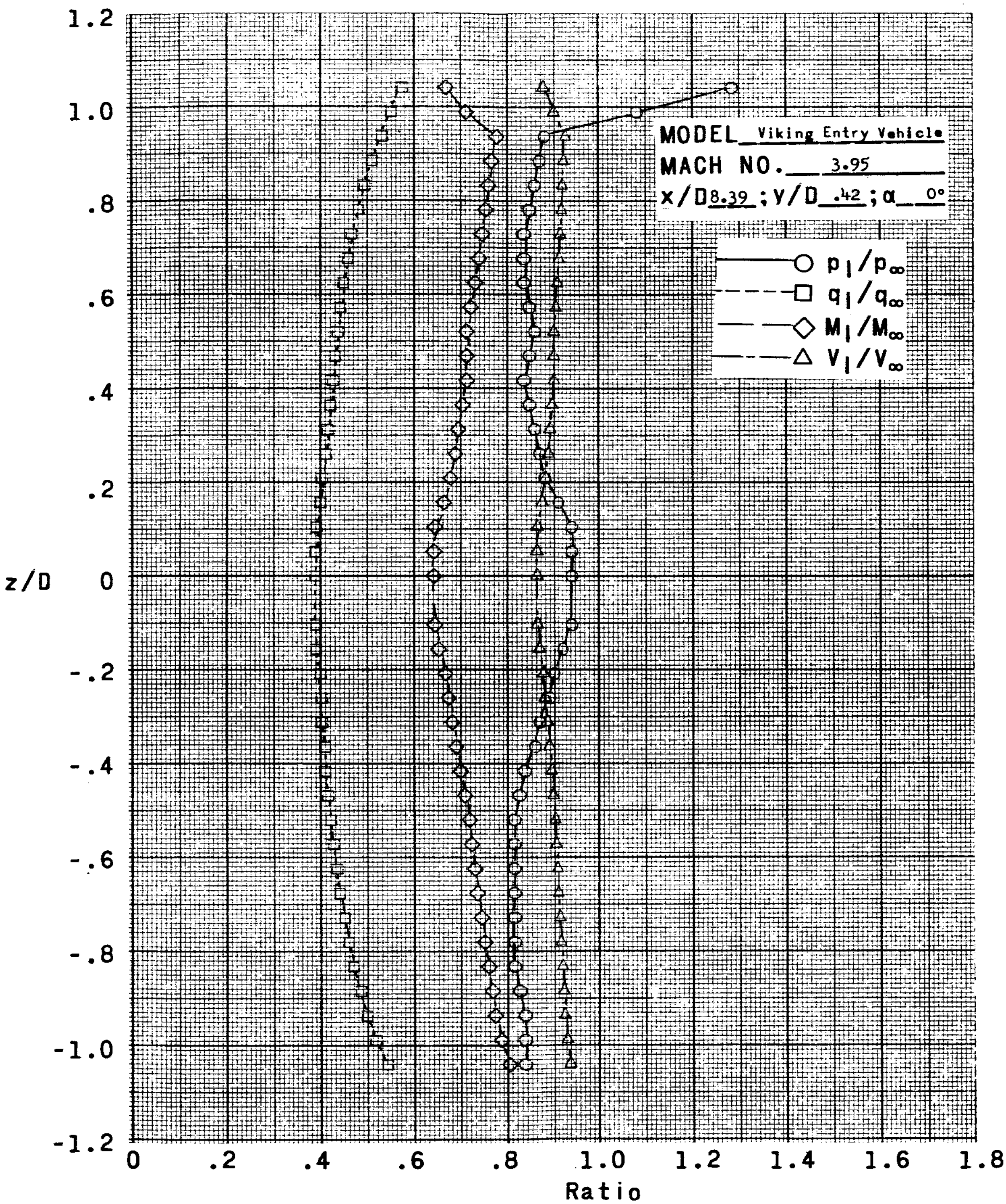
(gg) $x/D = 8.39$; $y/D = 0.83$; $\alpha = 0^0$.

Figure 8.- Continued.



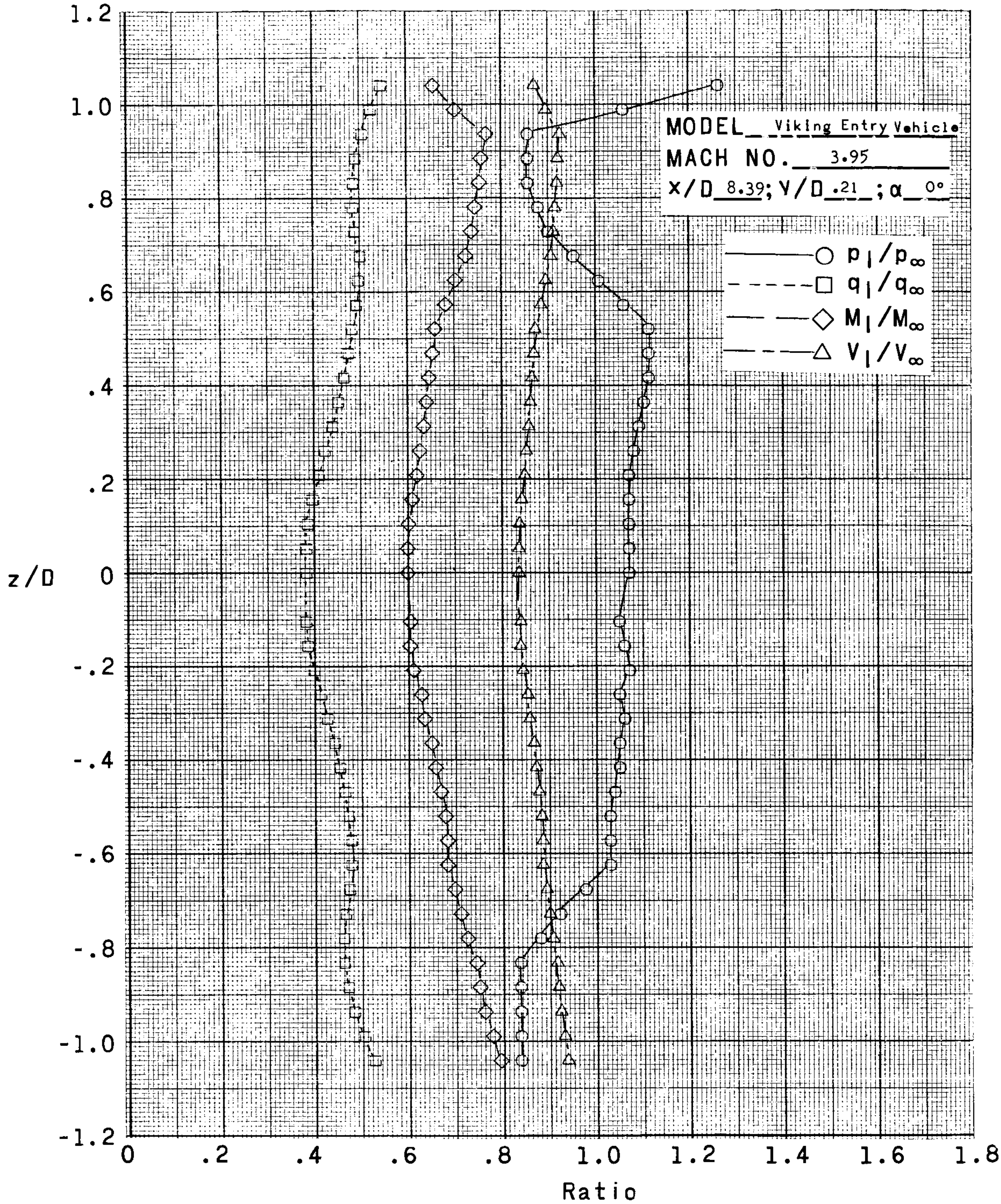
(hh) $x/D = 8.39$; $y/D = 0.63$; $\alpha = 0^0$.

Figure 8.- Continued.



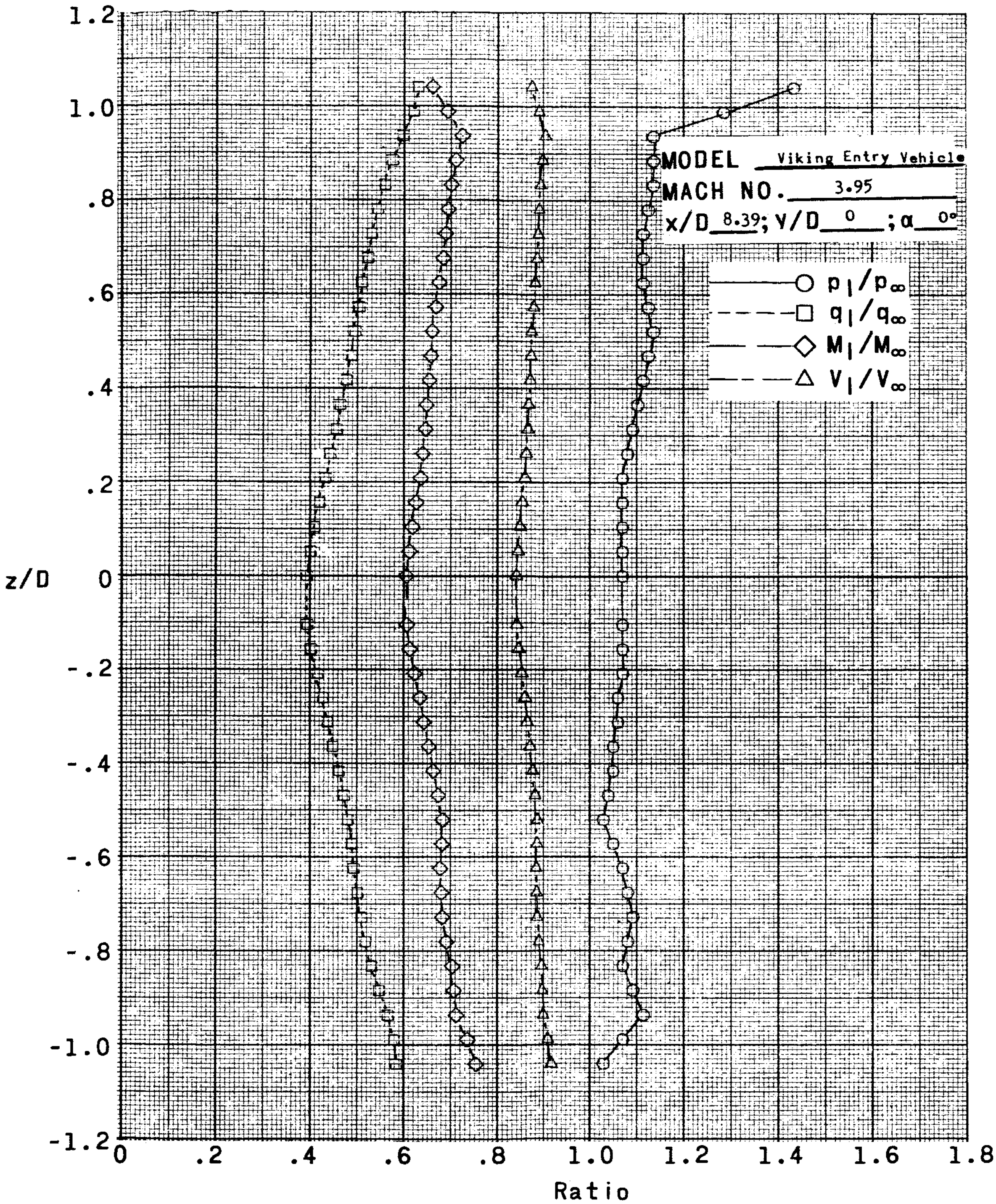
(ii) $x/D = 8.39$; $y/D = 0.42$; $\alpha = 0^o$.

Figure 8.- Continued.



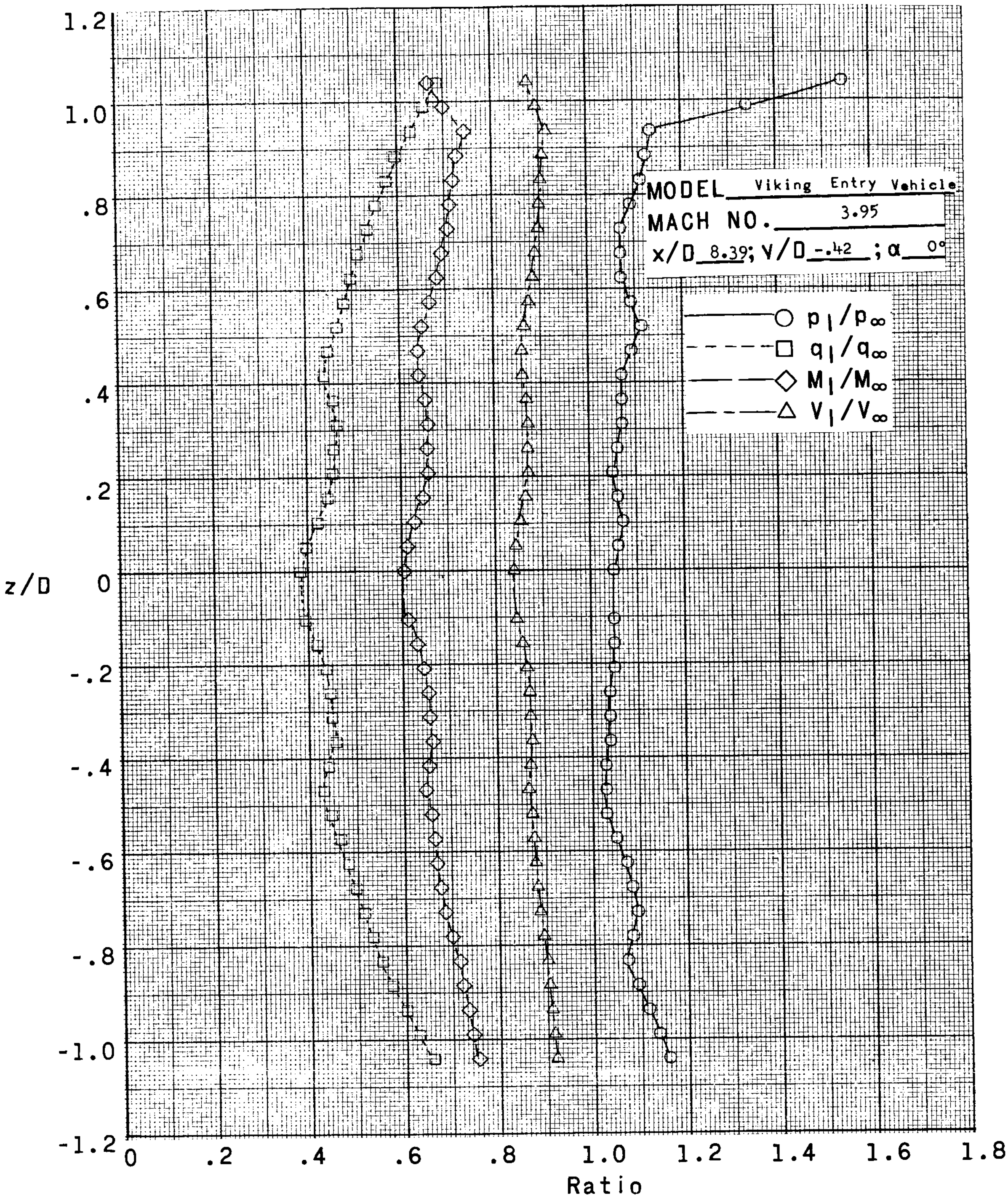
(jj) $x/D = 8.39$; $y/D = 0.21$; $\alpha = 0^{0}$.

Figure 8.- Continued.



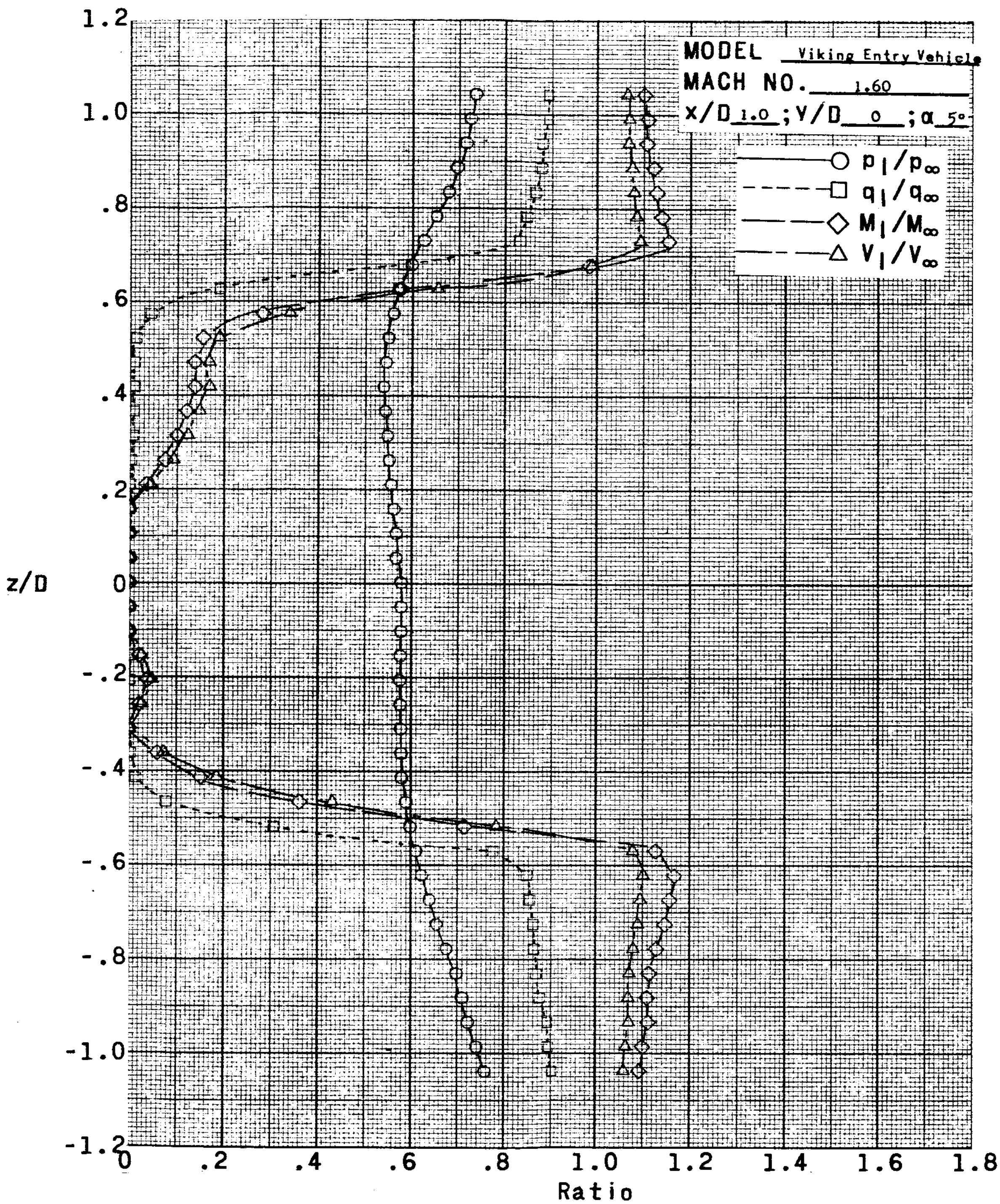
(kk) $x/D = 8.39$; $y/D = 0$; $\alpha = 0^0$.

Figure 8.- Continued.



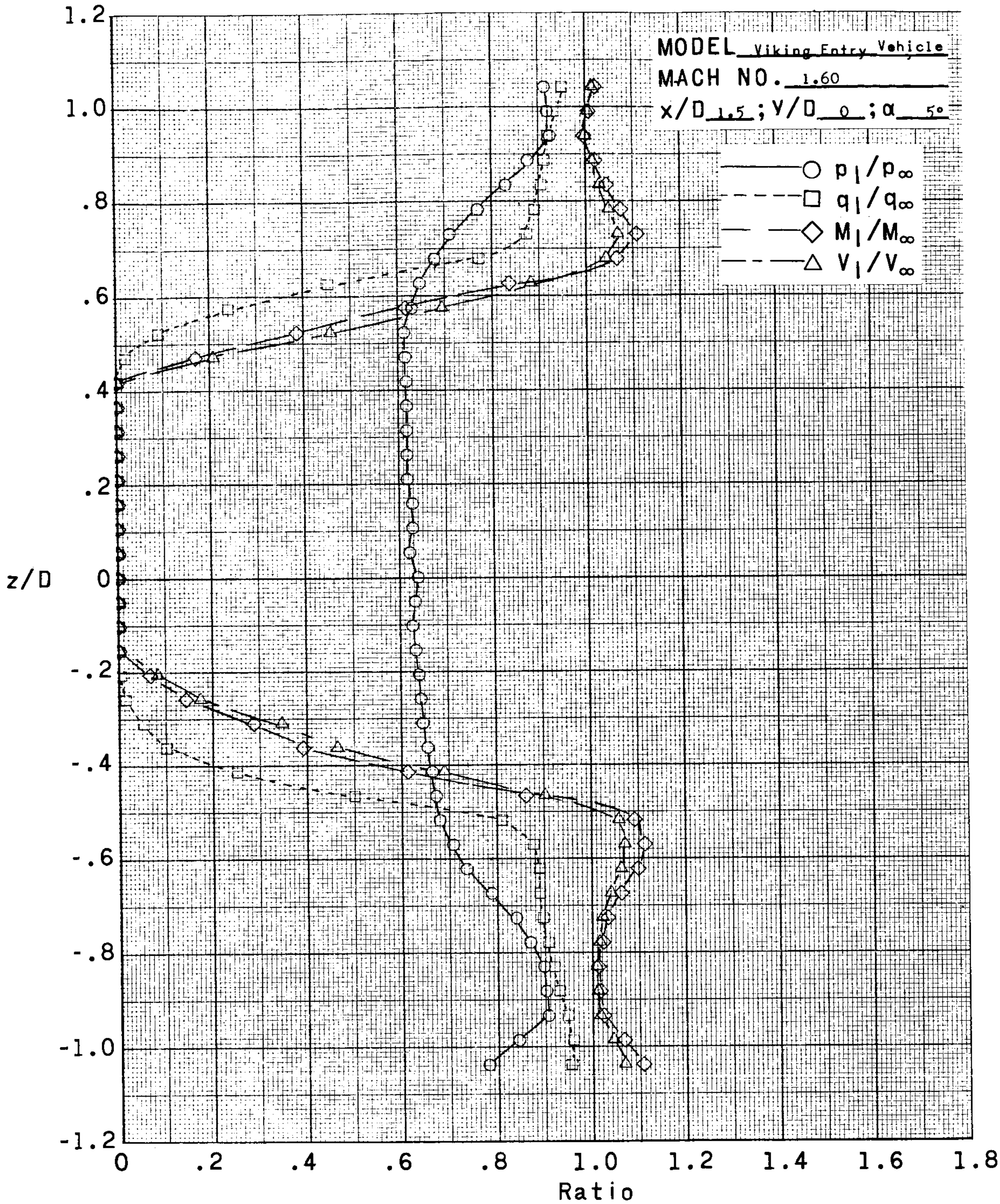
(ll) $x/D = 8.39$; $y/D = -0.42$; $\alpha = 0^{o}$.

Figure 8.- Concluded.



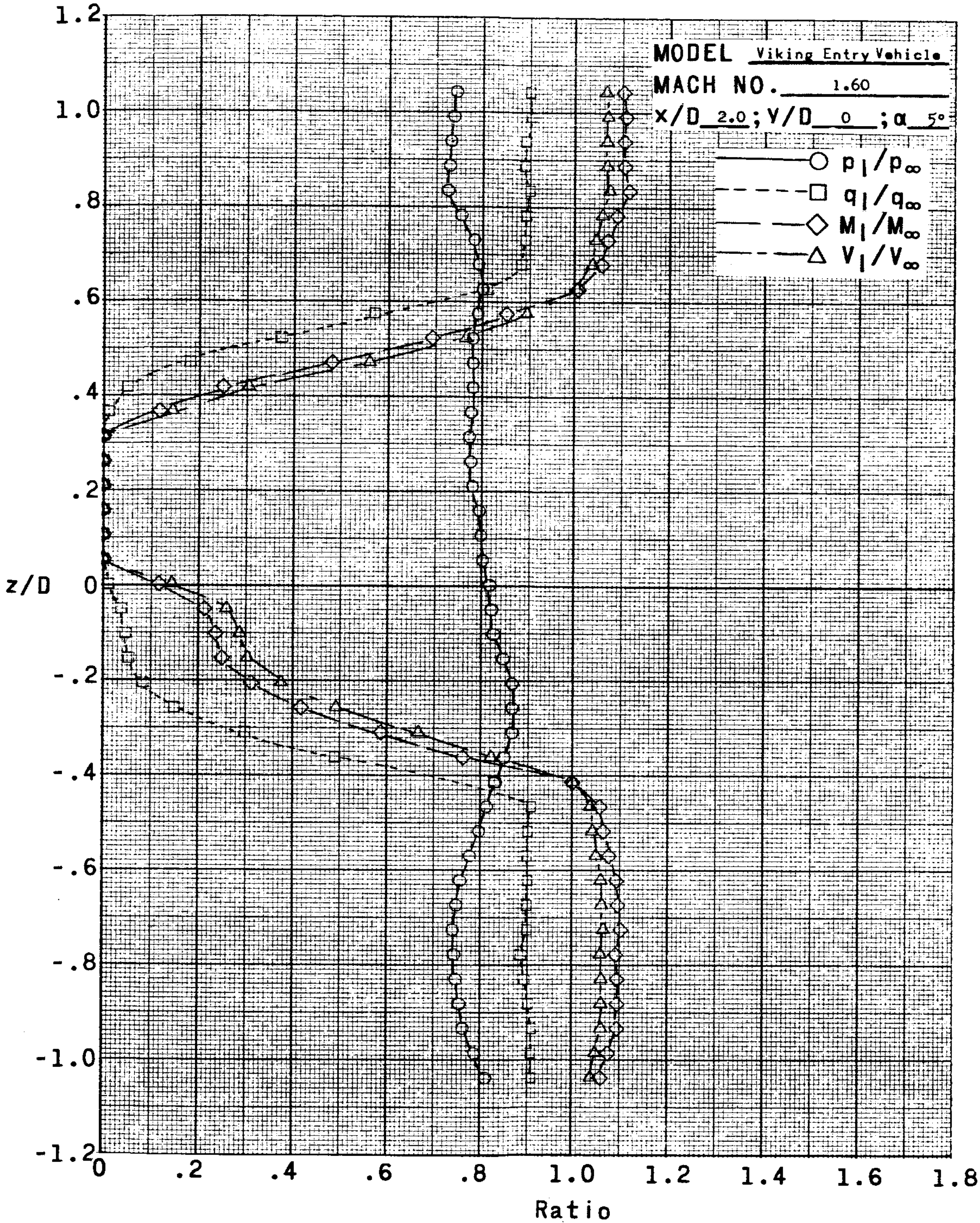
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D at the center of wake of the Viking Entry Vehicle at a Mach number of 1.60 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



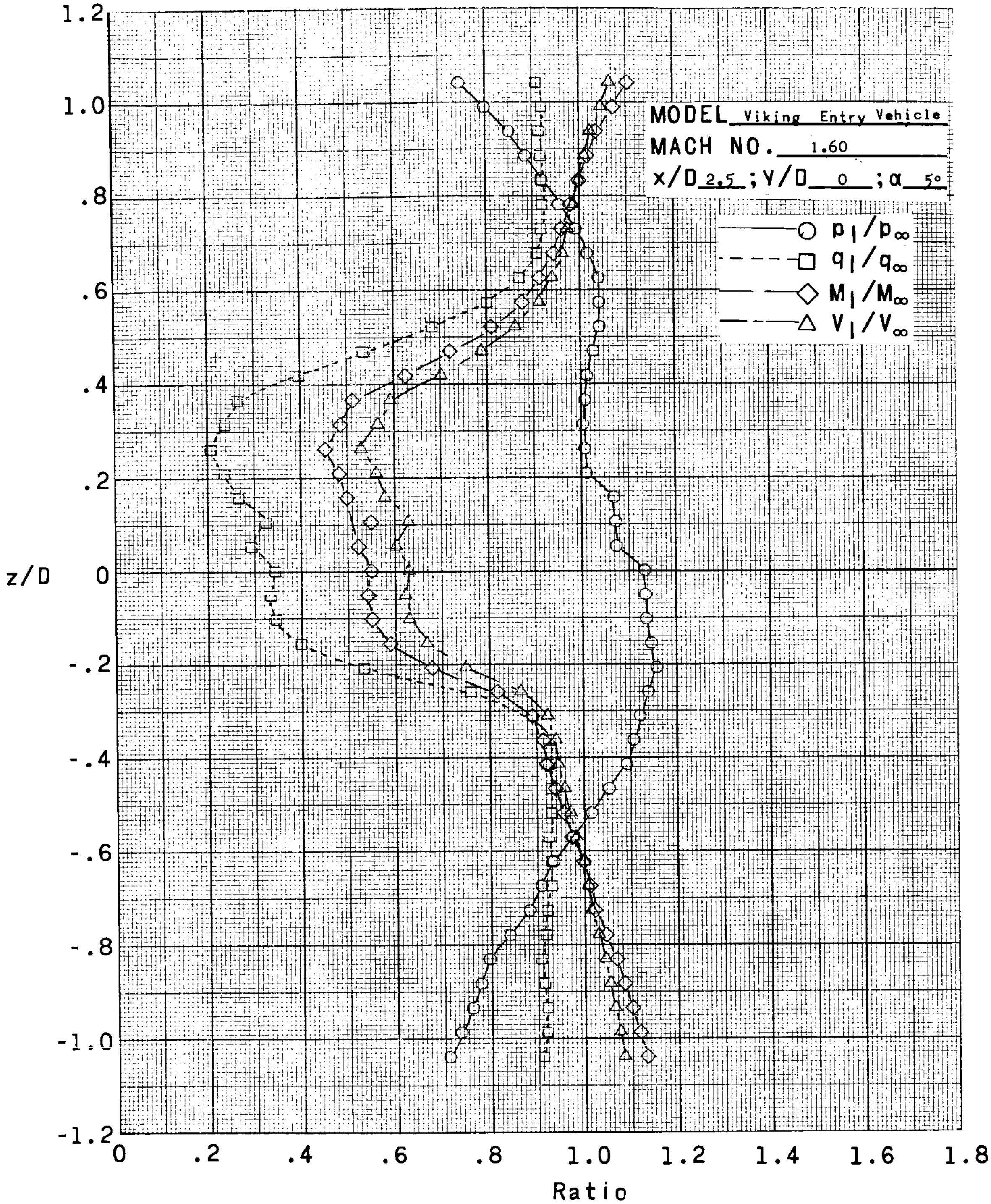
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



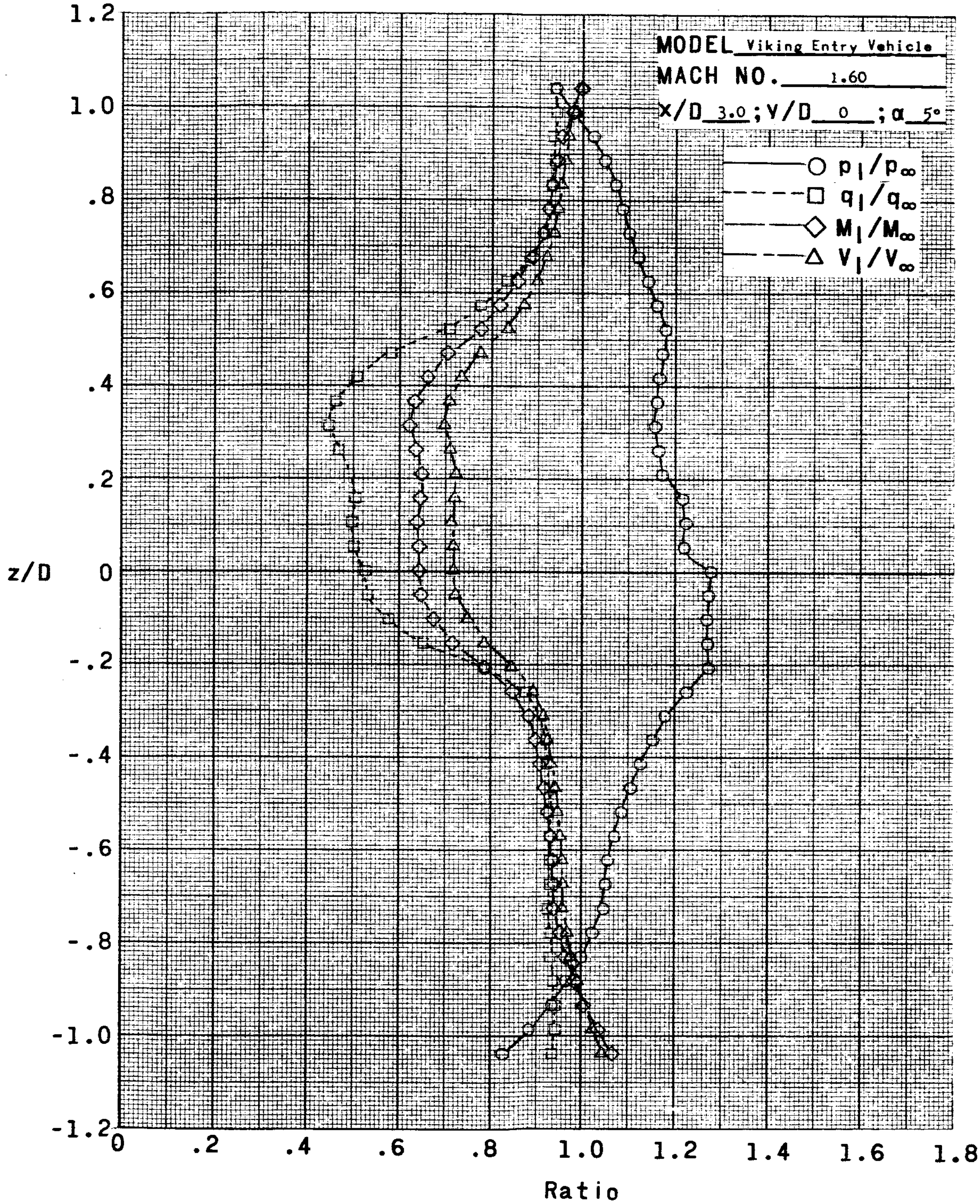
(c) x/D = 2.0; y/D = 0; α = 5°.

Figure 9.- Continued.



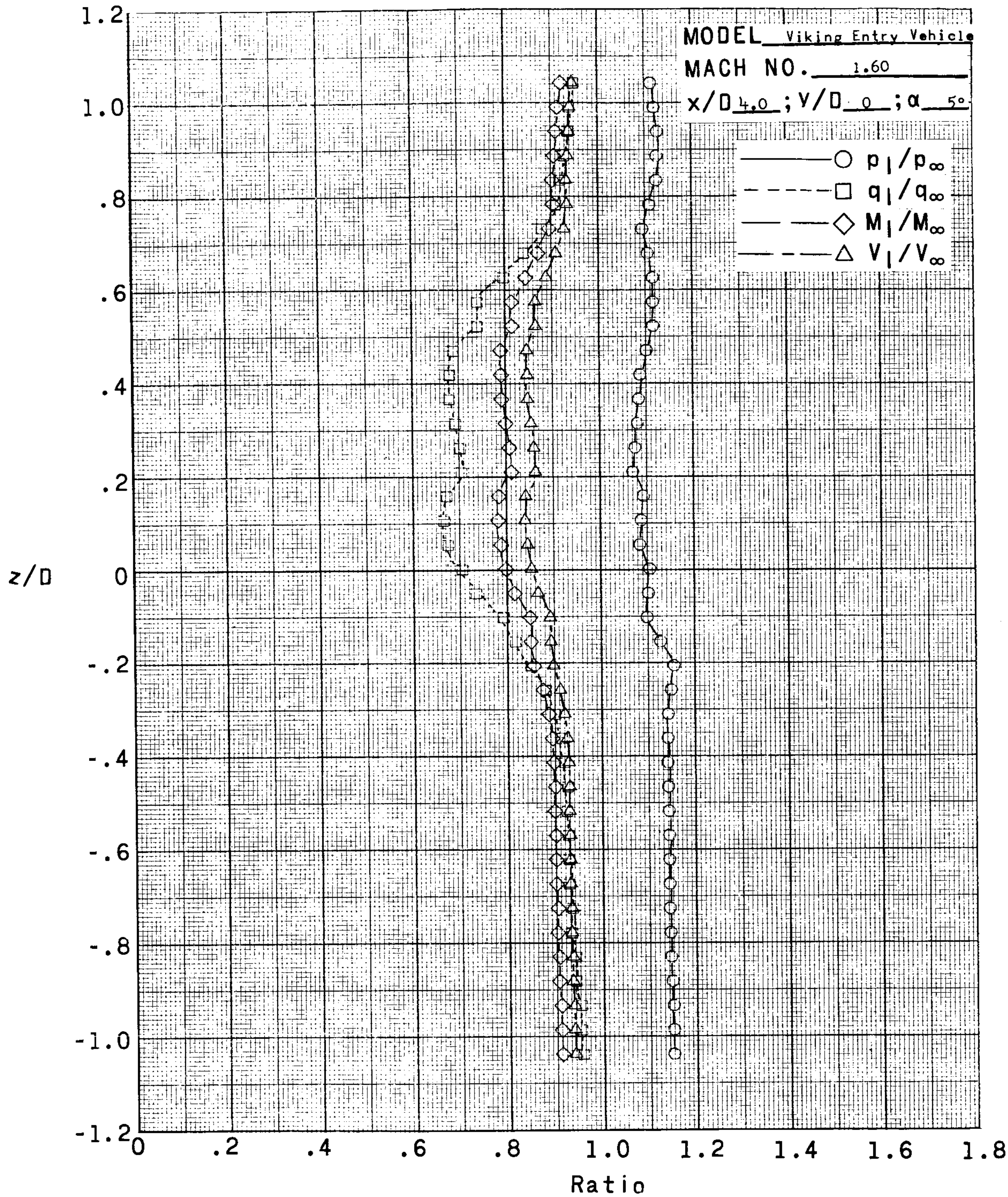
(d) x/D = 2.5; y/D = 0; α = 5°.

Figure 9.- Continued.



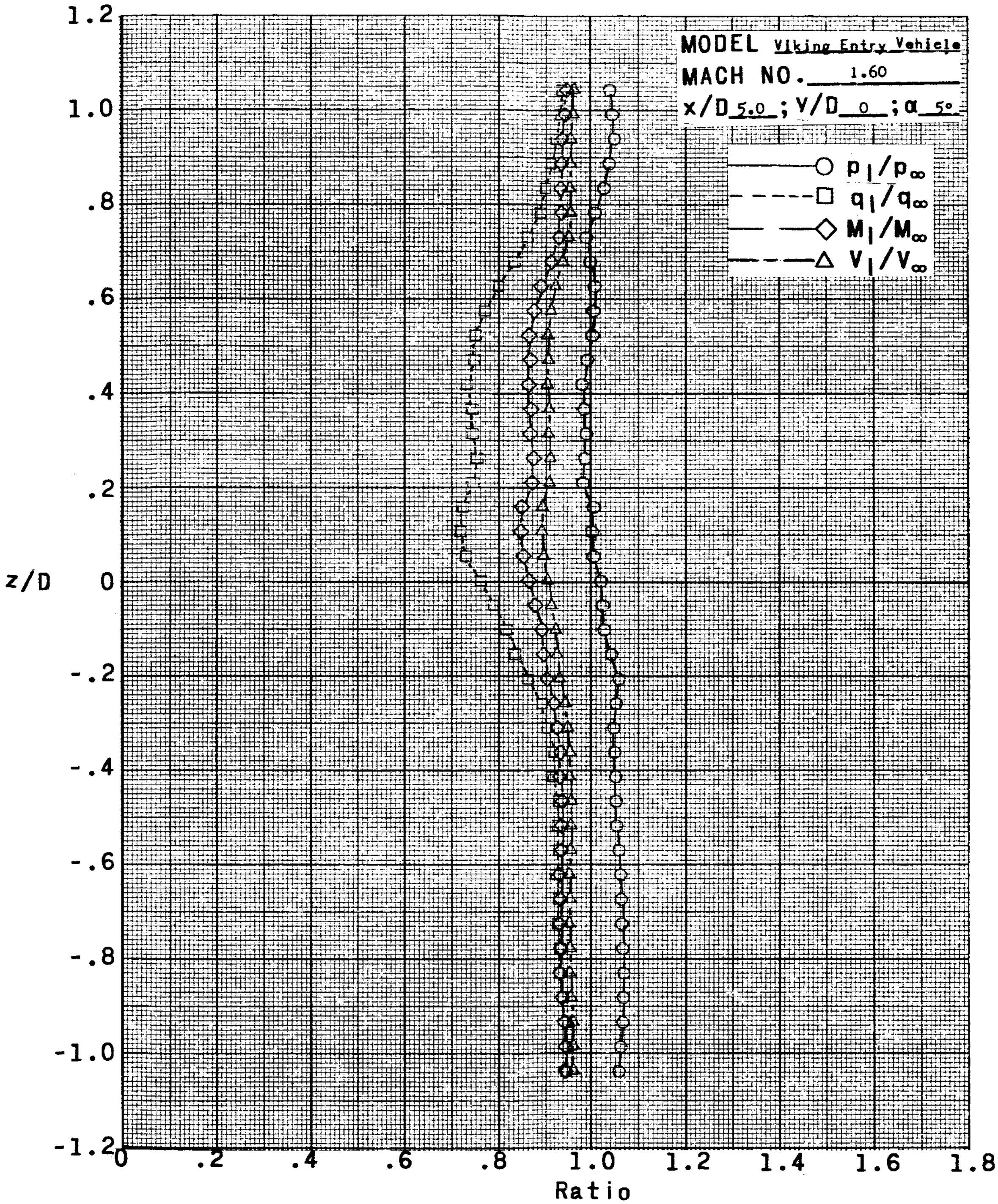
(e) $x/D = 3.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



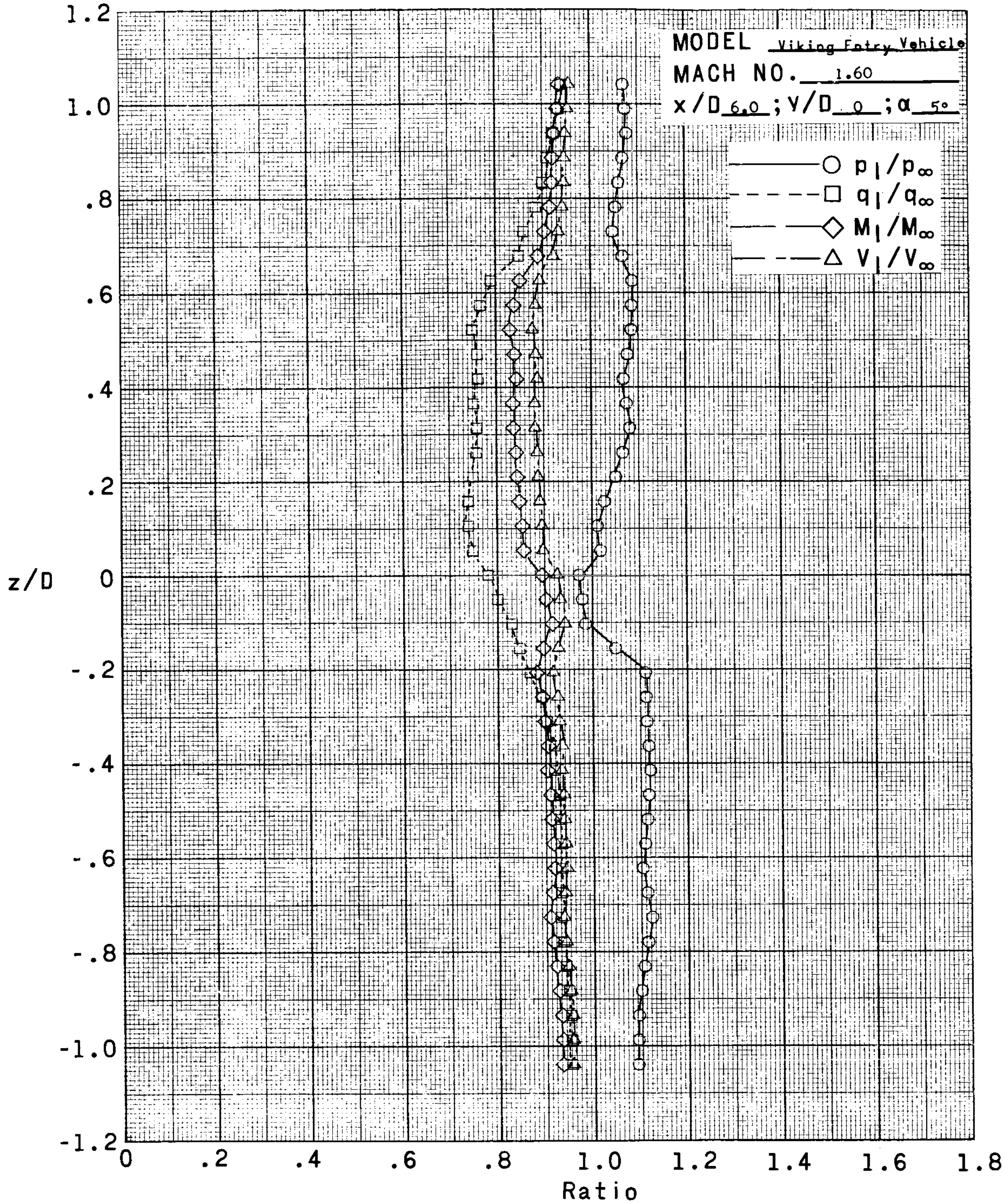
(f) $x/D = 4.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



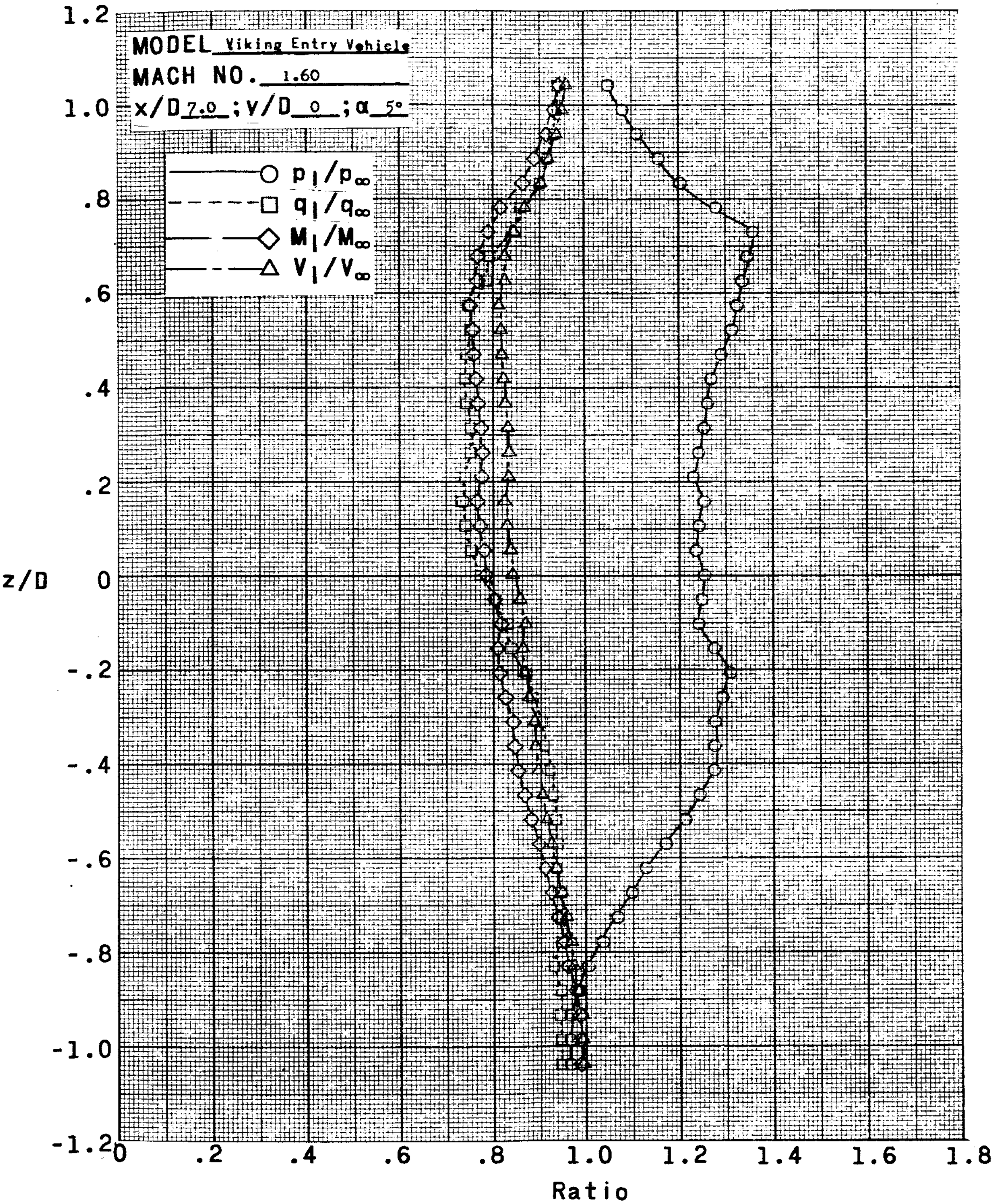
(g) $x/D = 5.0$; $y/D = 0$; $\alpha = 5^{0}$.

Figure 9.- Continued.



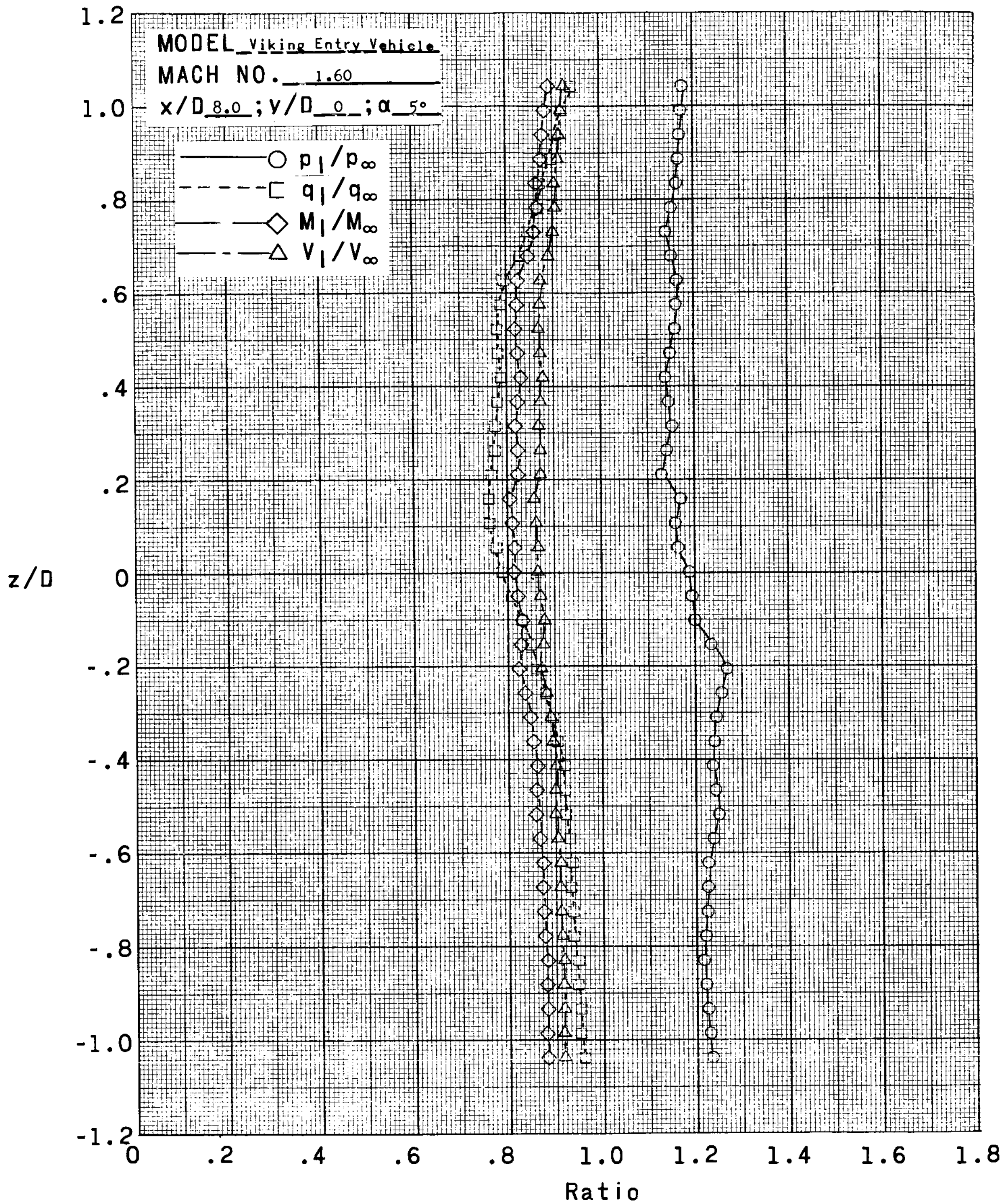
(h) $x/D = 6.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



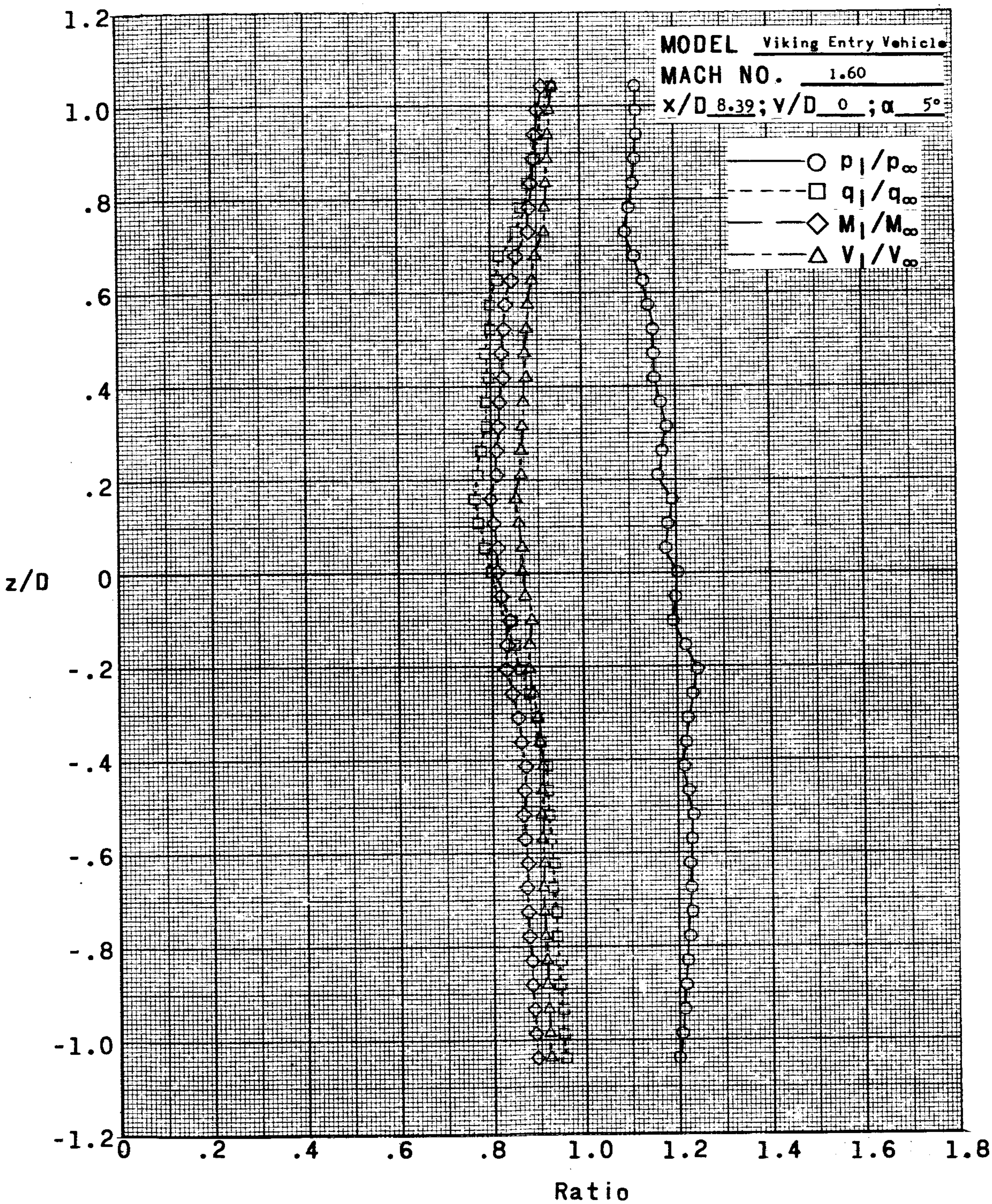
(i) $x/D = 7.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



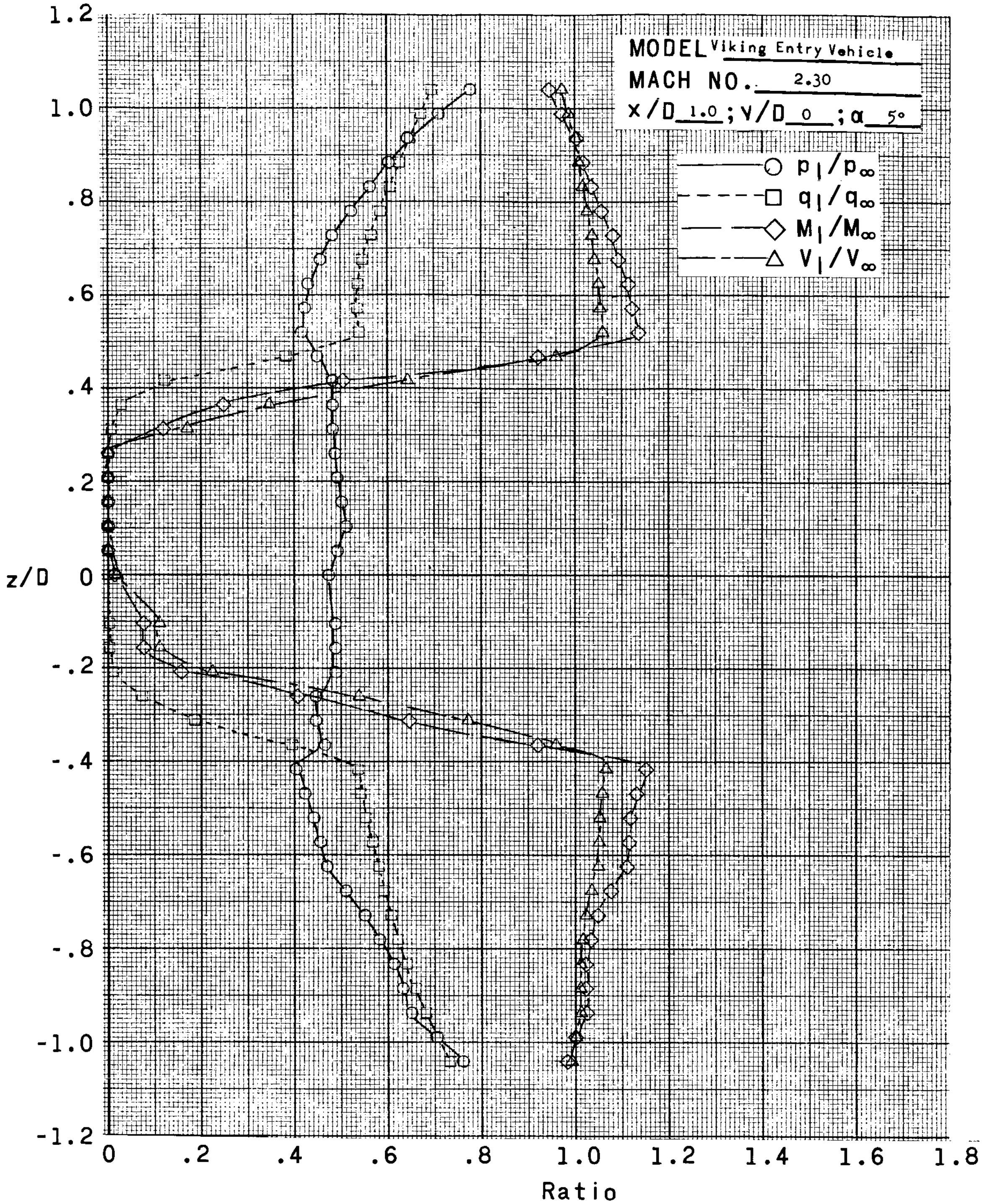
(j) $x/D = 8.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 9.- Continued.



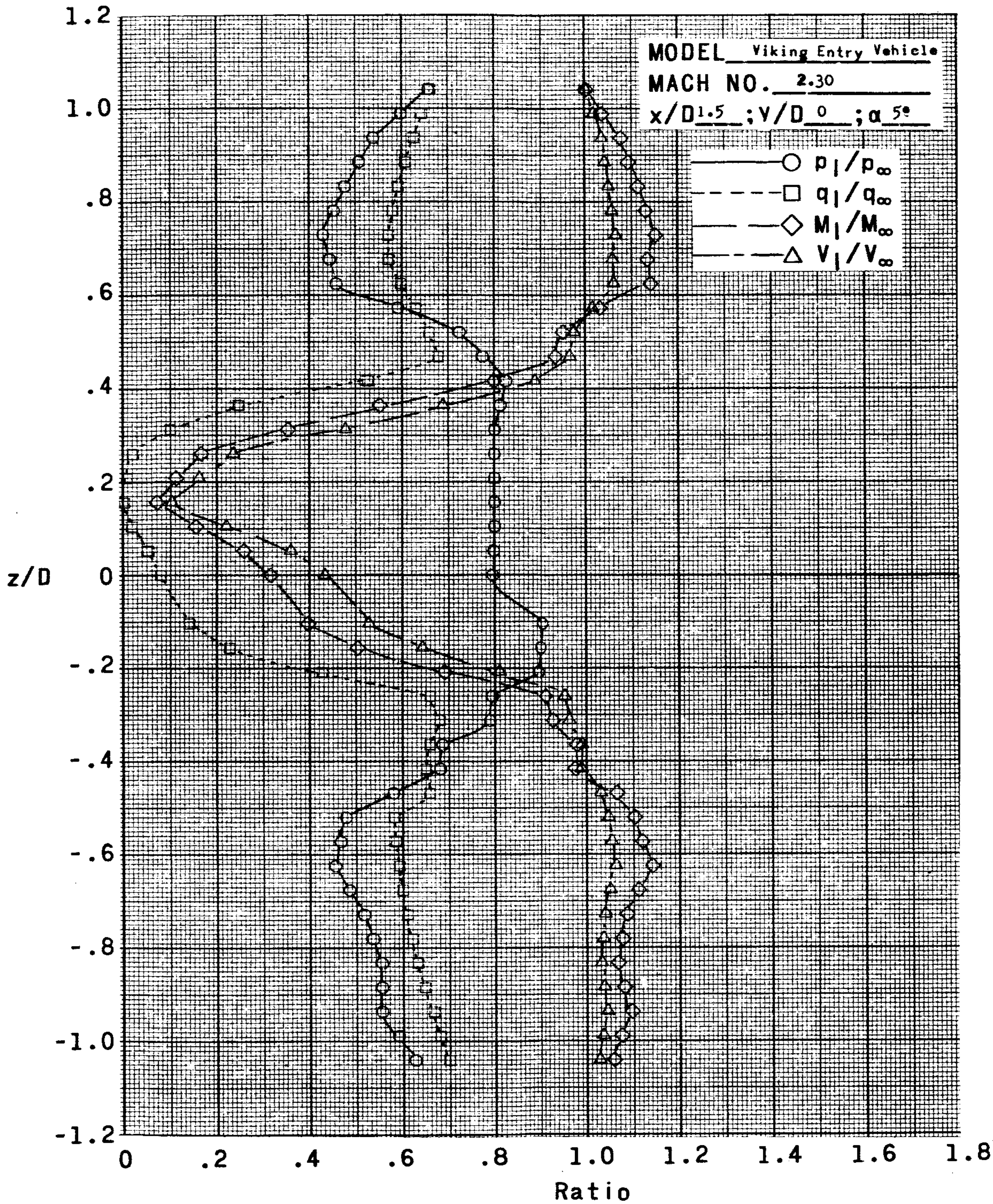
(k) x/D = 8.39; y/D = 0; α = 5°.

Figure 9.- Concluded.



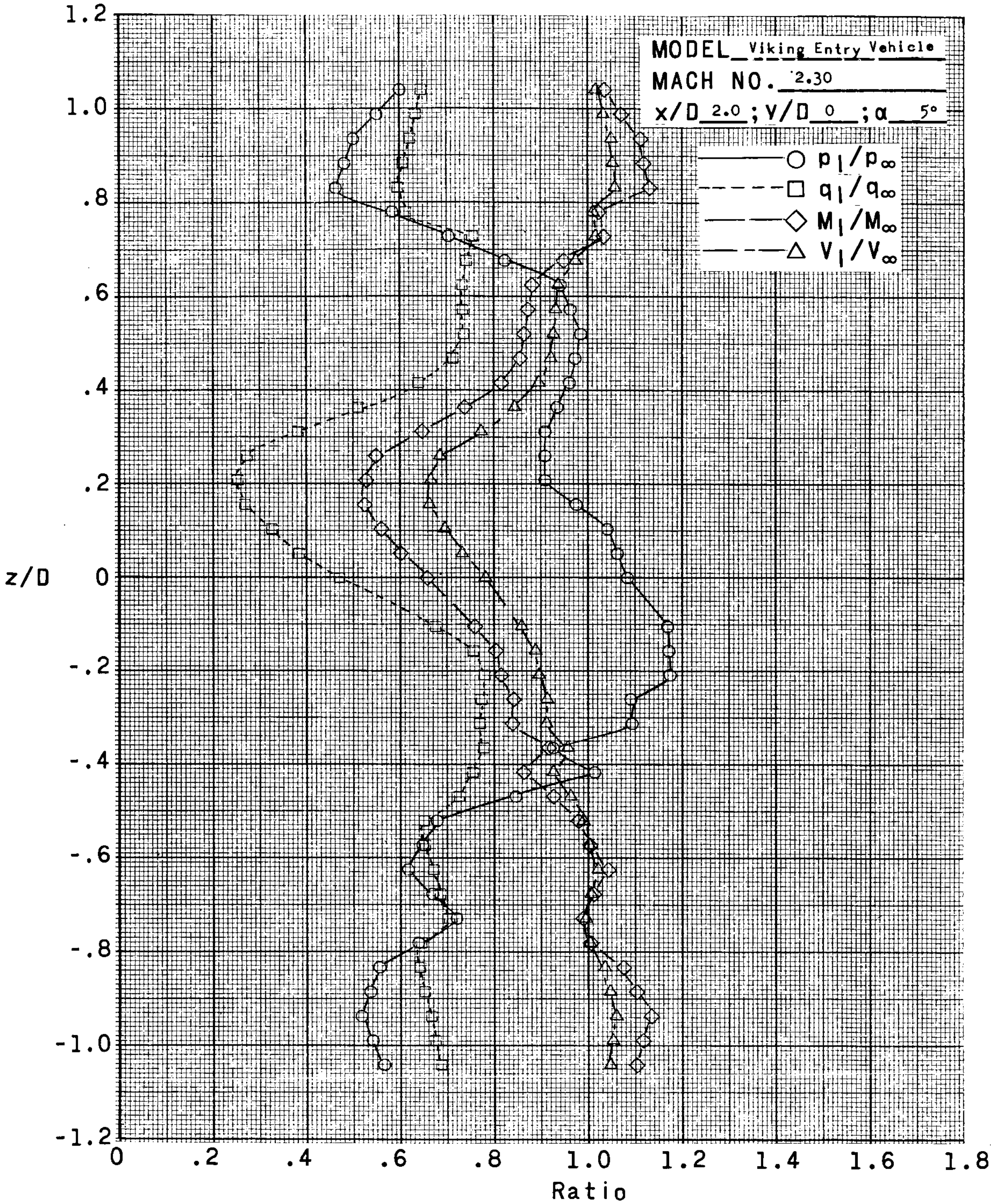
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 5^{0}$.

Figure 10.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D at the center of wake of the Viking Entry Vehicle at a Mach number of 2.30 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



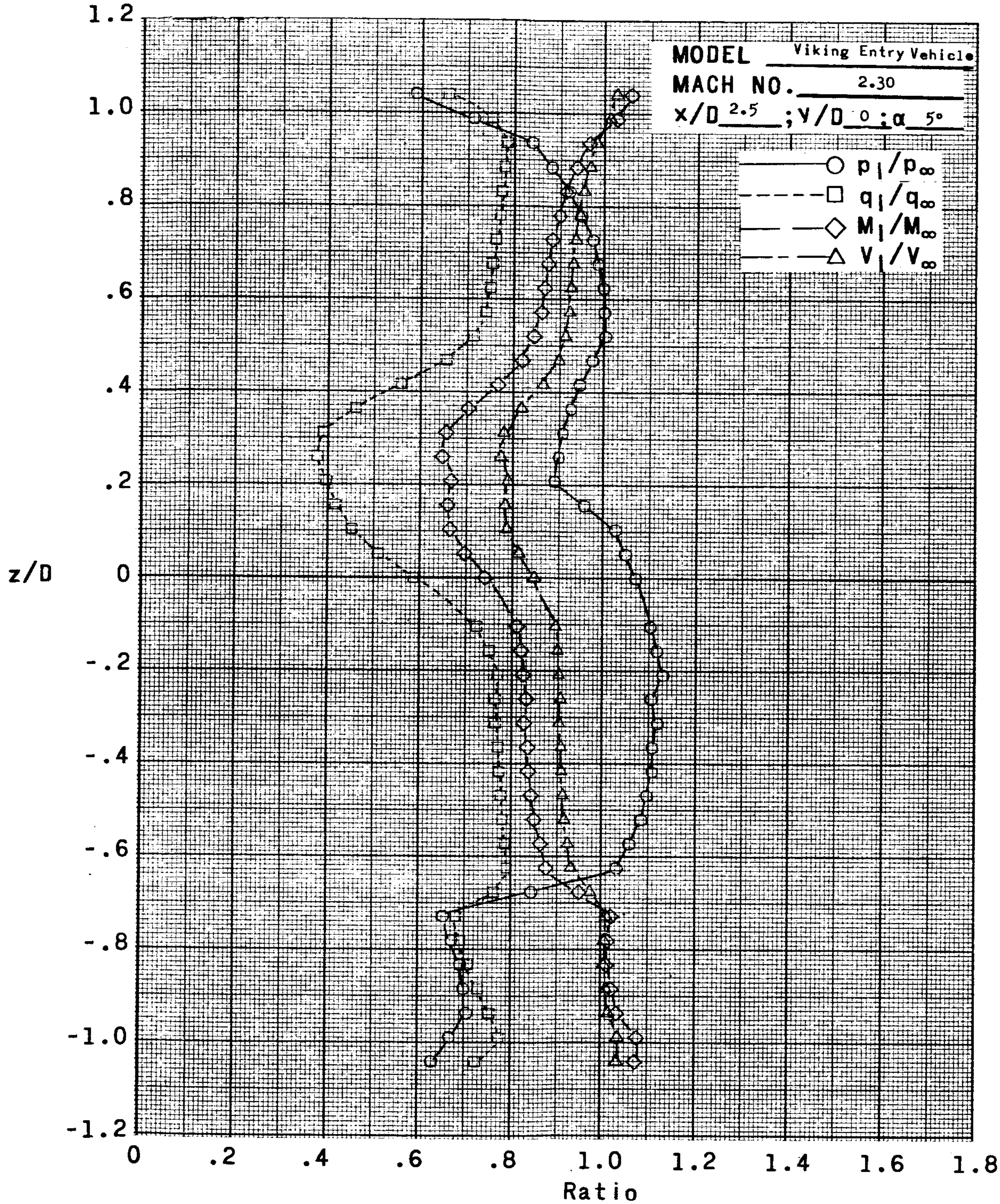
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



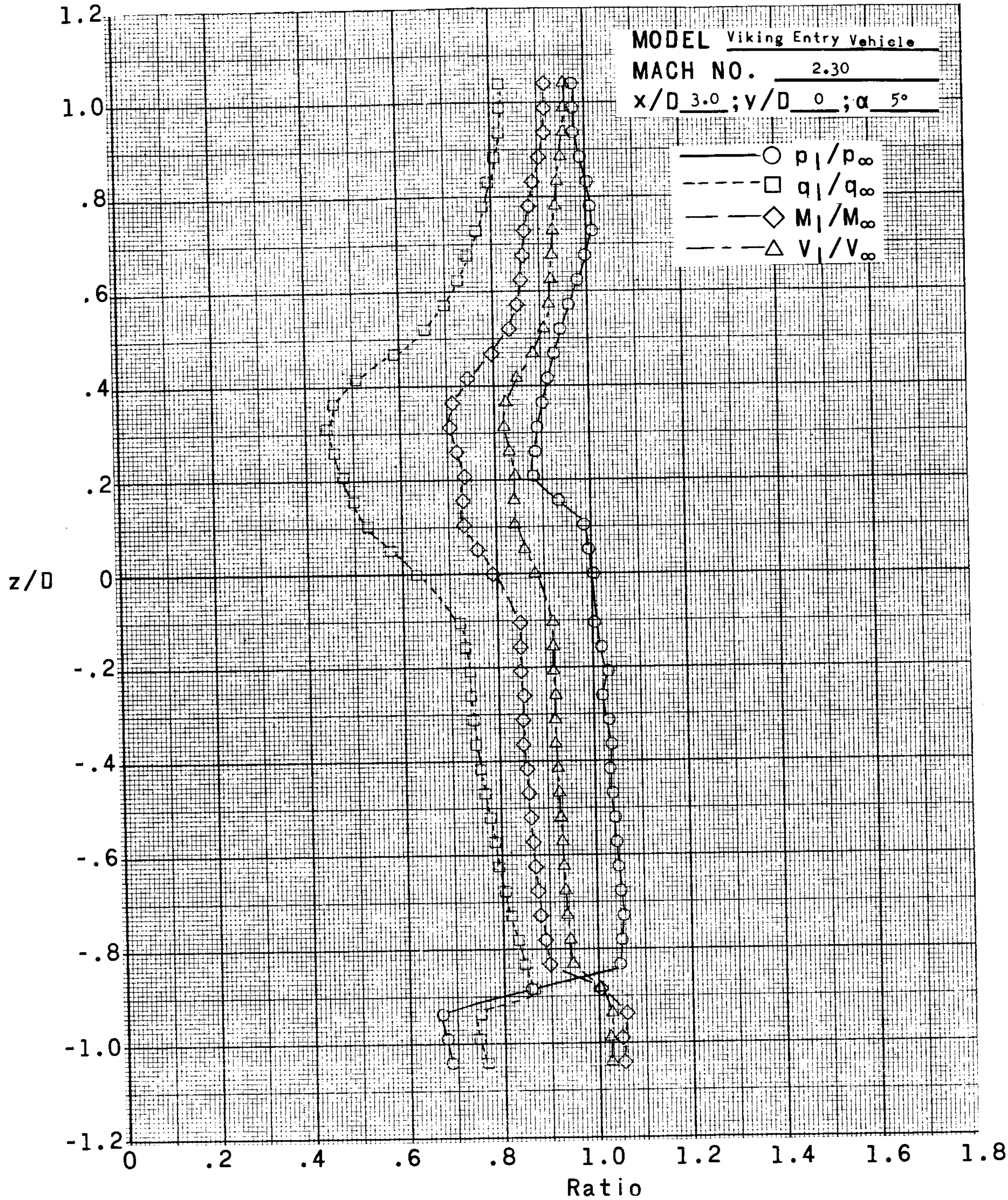
(c) $x/D = 2.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



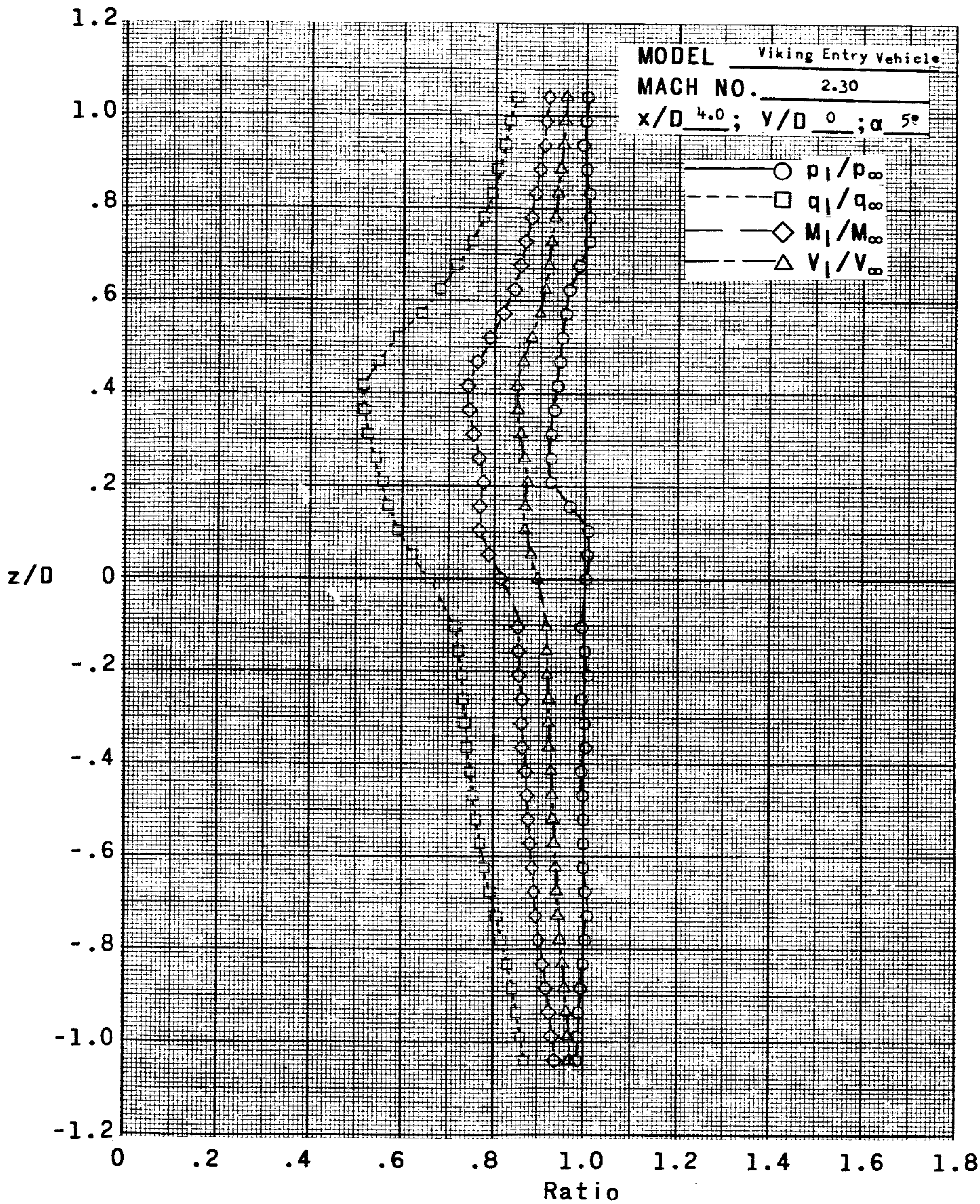
(d) $x/D = 2.5$; $y/D = 0$; $\alpha = 5^{\circ}$.

Figure 10.- Continued.



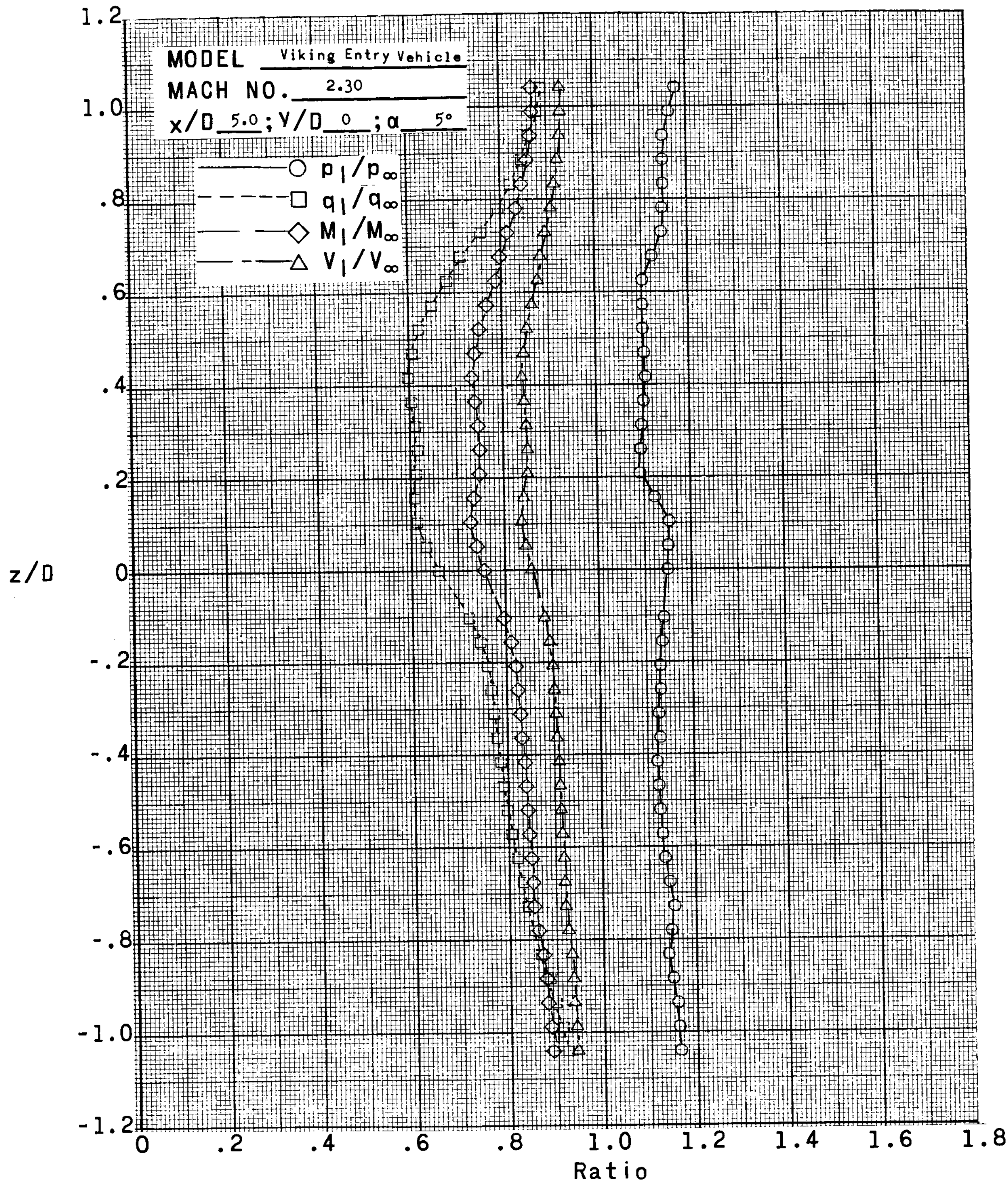
(e) x/D = 3.0; y/D = 0; α = 5°.

Figure 10.- Continued.



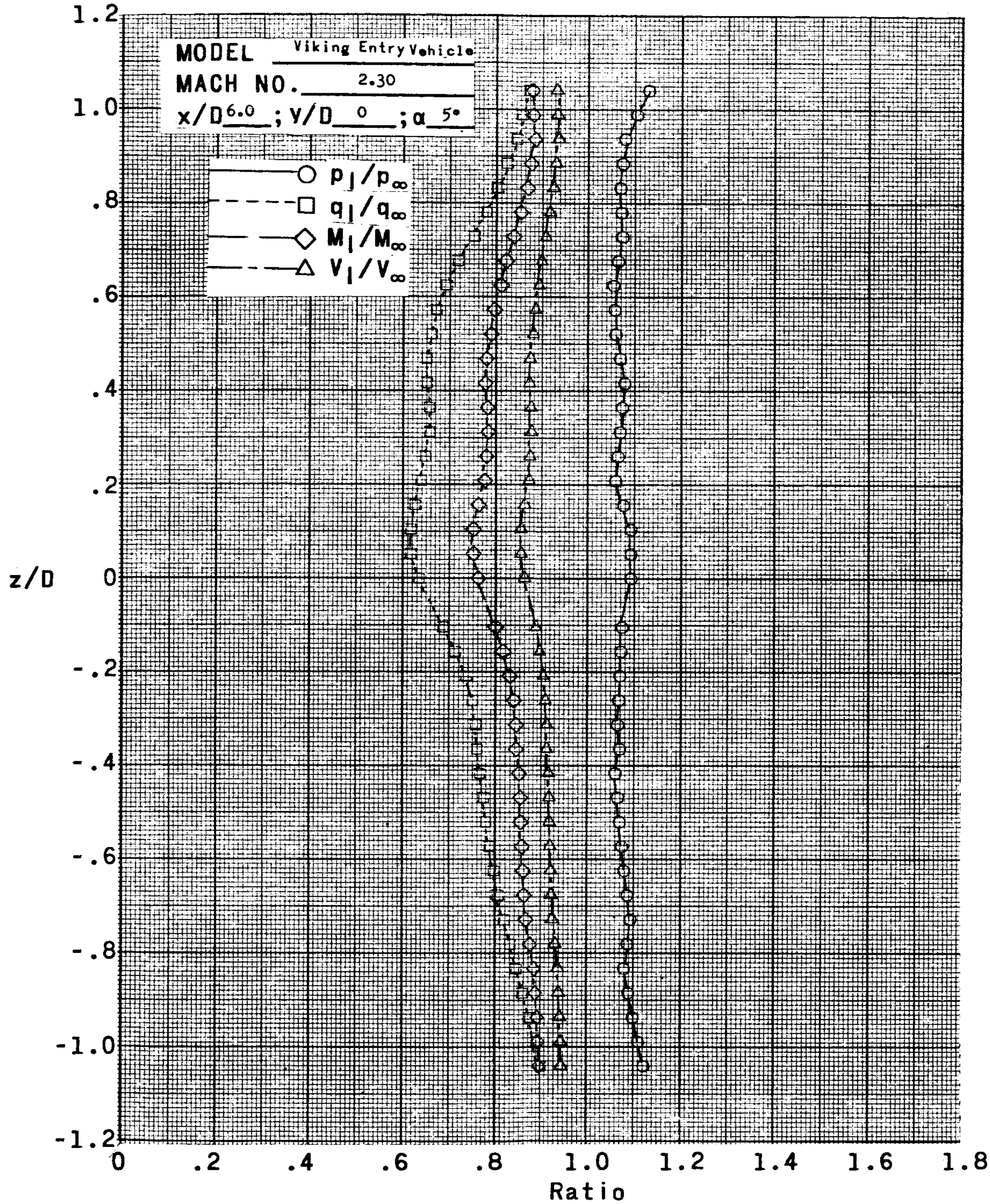
(f) $x/D = 4.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



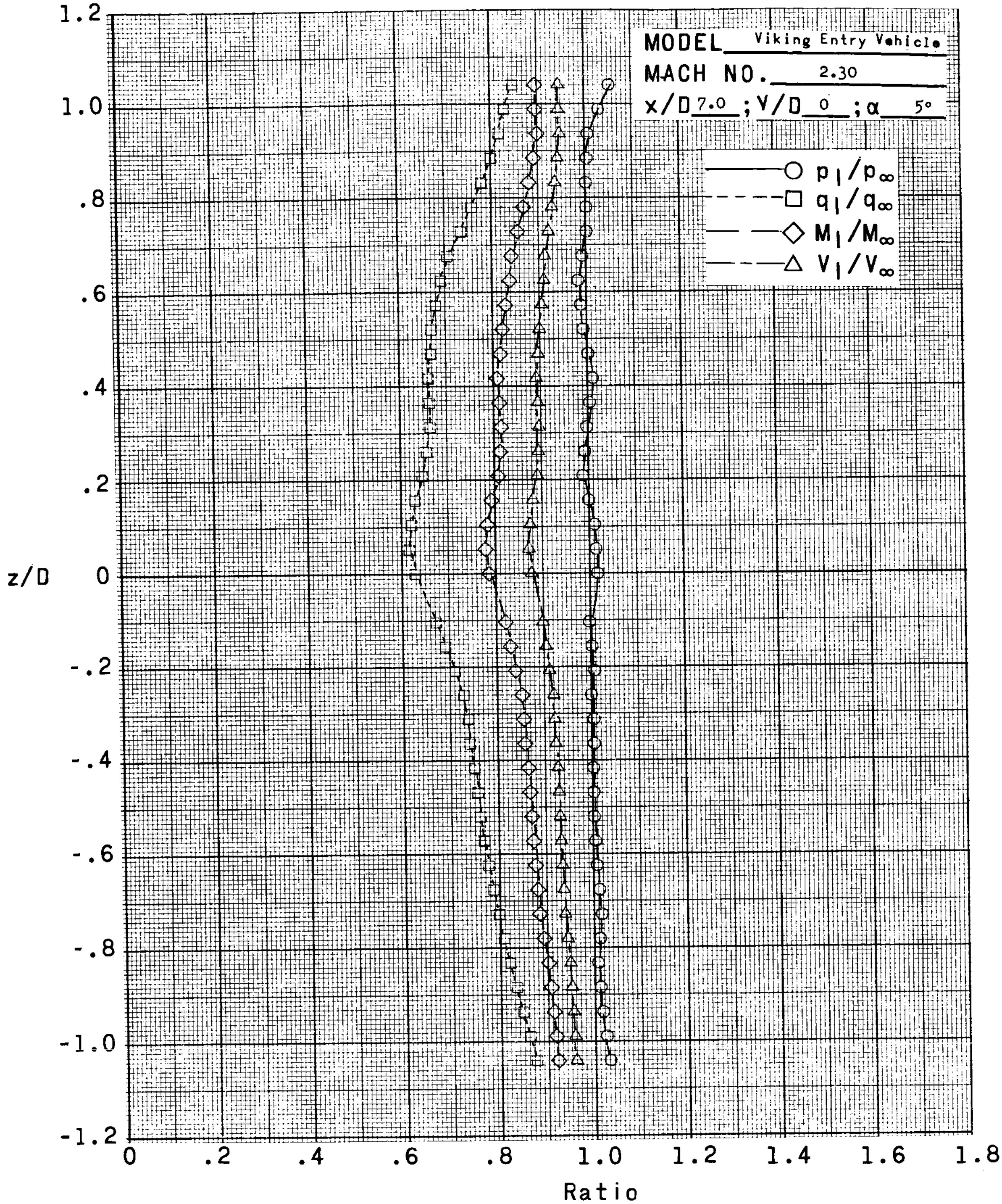
(g) $x/D = 5.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



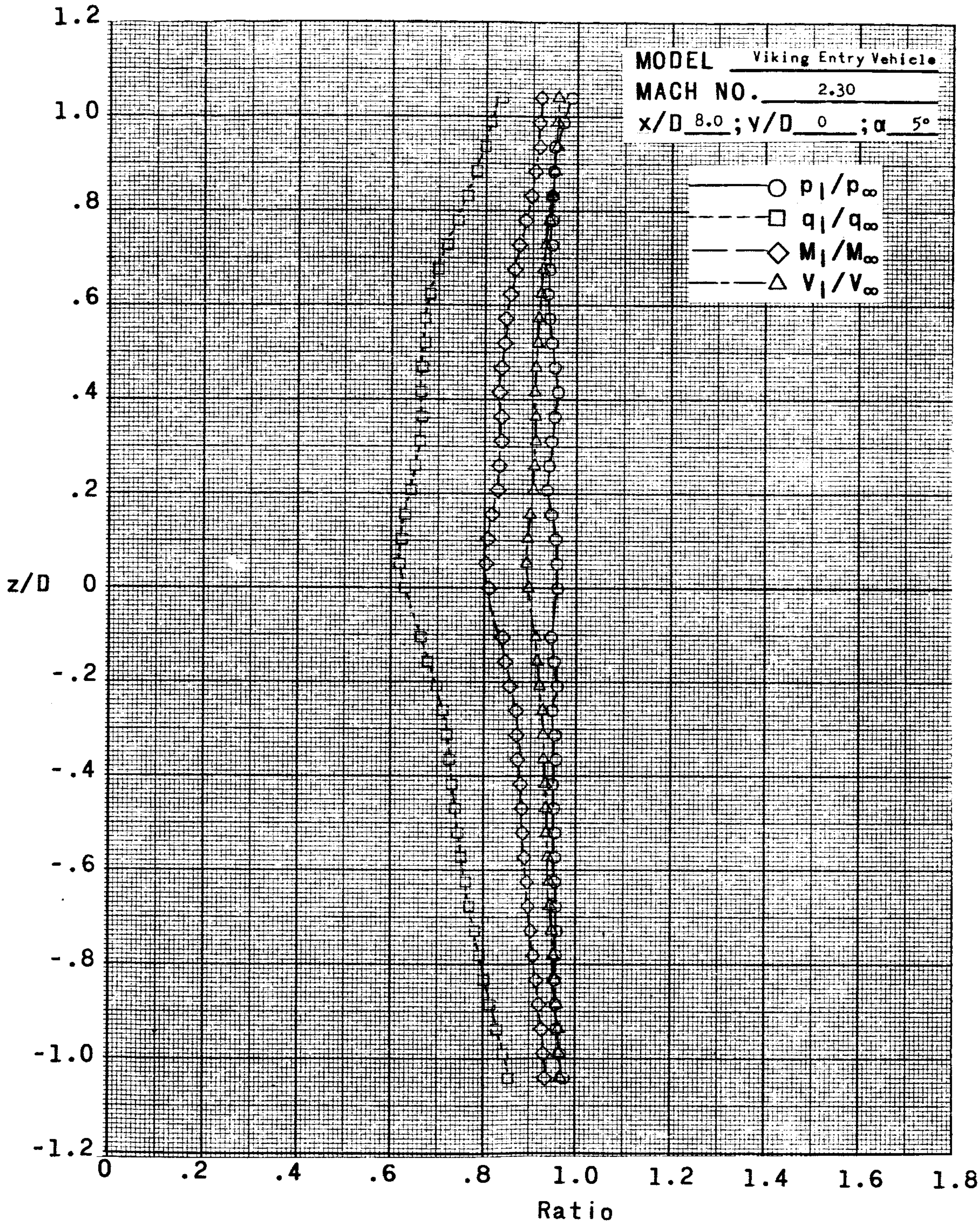
(h) $x/D = 6.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



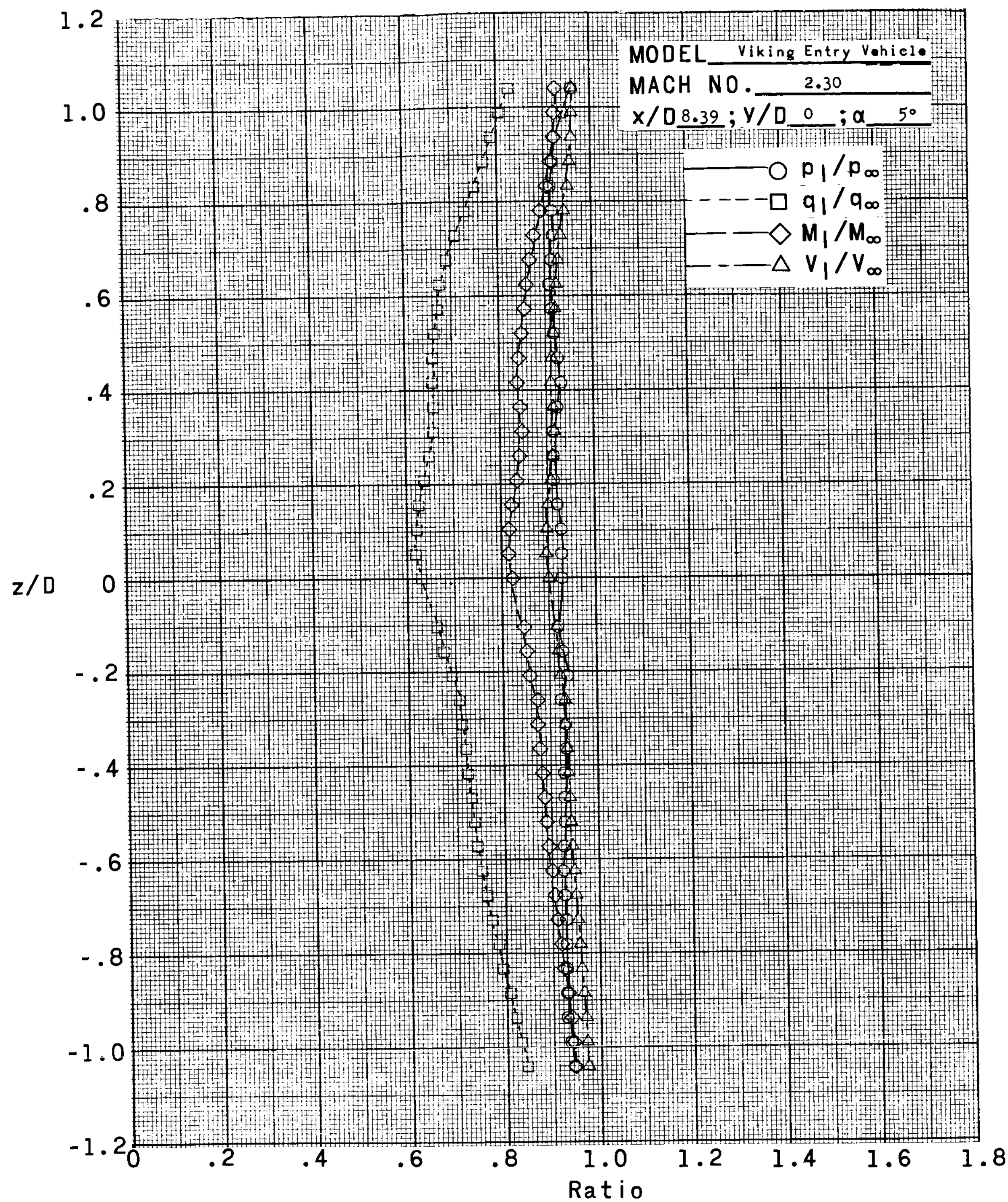
(i) $x/D = 7.0$; $y/D = 0$; $\alpha = 5^{0}$.

Figure 10.- Continued.



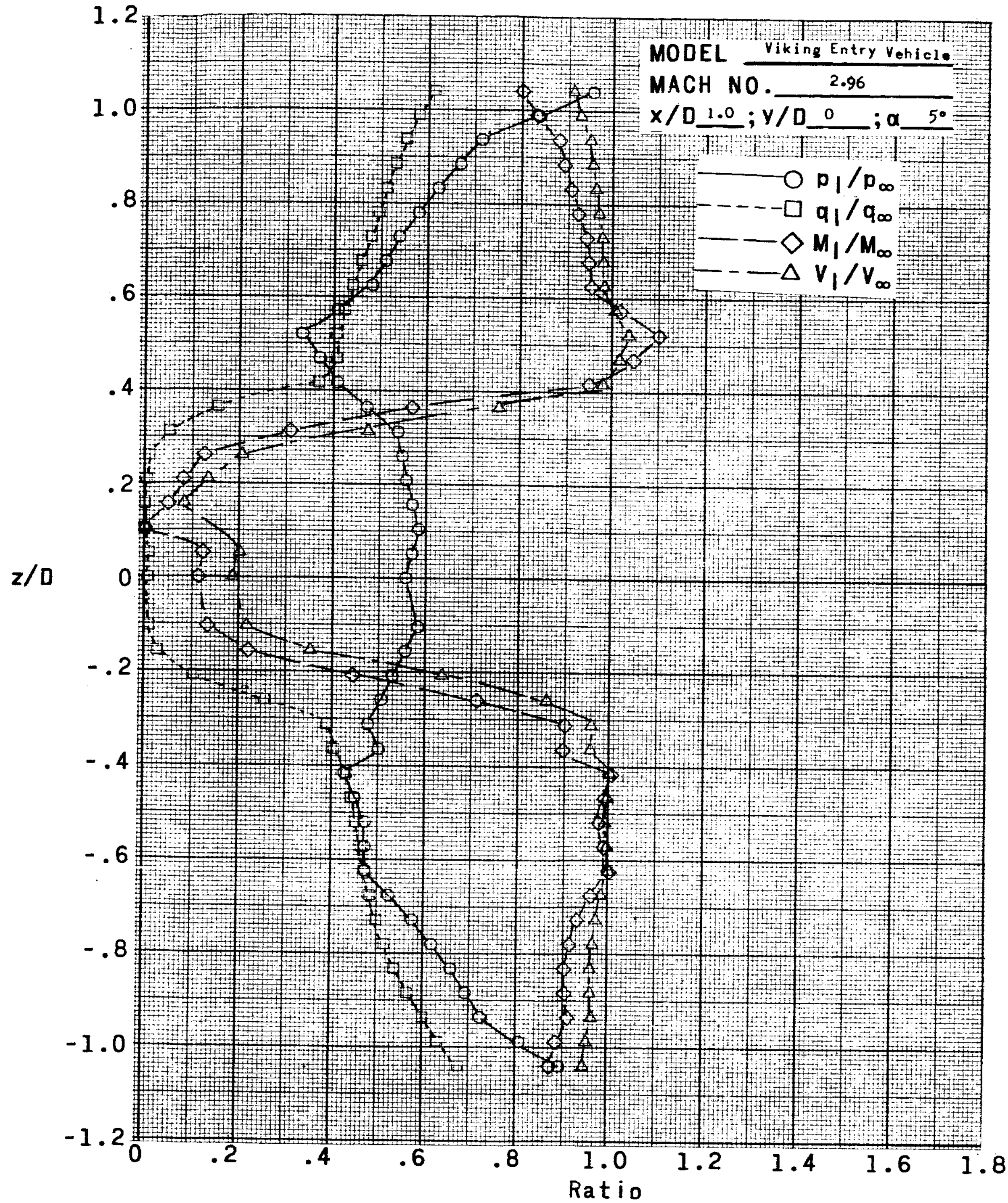
(j) $x/D = 8.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 10.- Continued.



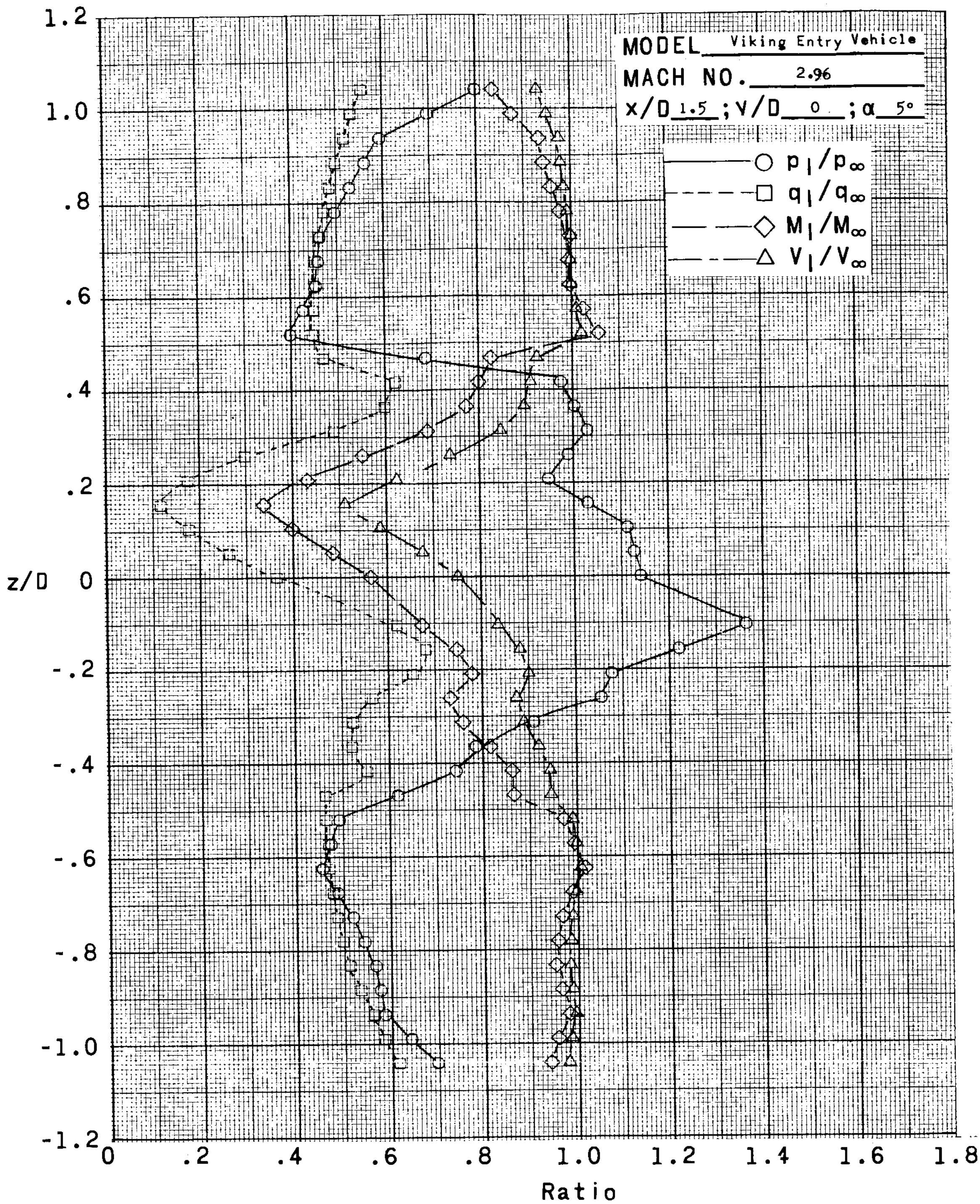
(k) x/D = 8.39; y/D = 0; α = 5°.

Figure 10.- Concluded.



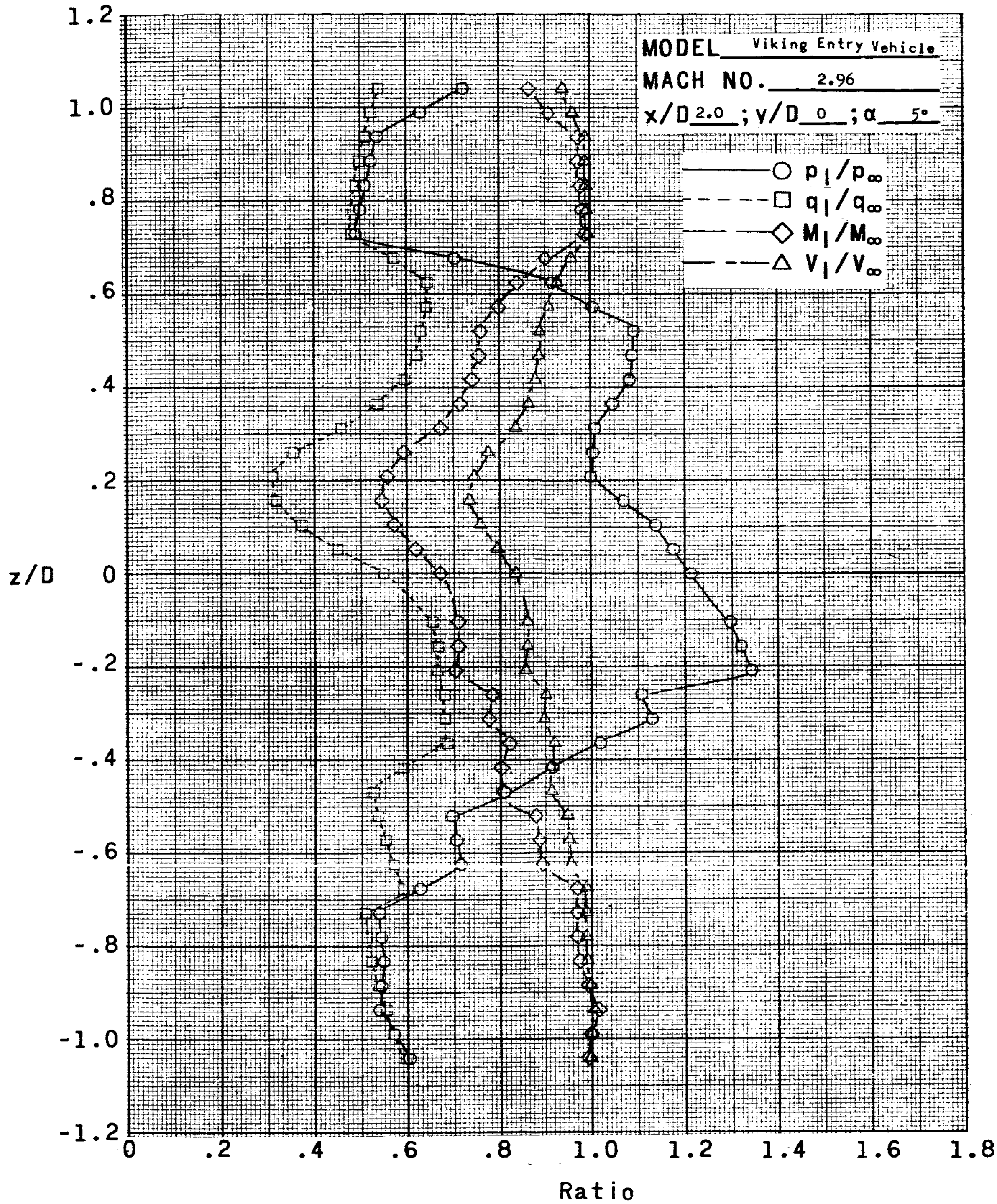
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D at the center of wake of the Viking Entry Vehicle at a Mach number of 2.96 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



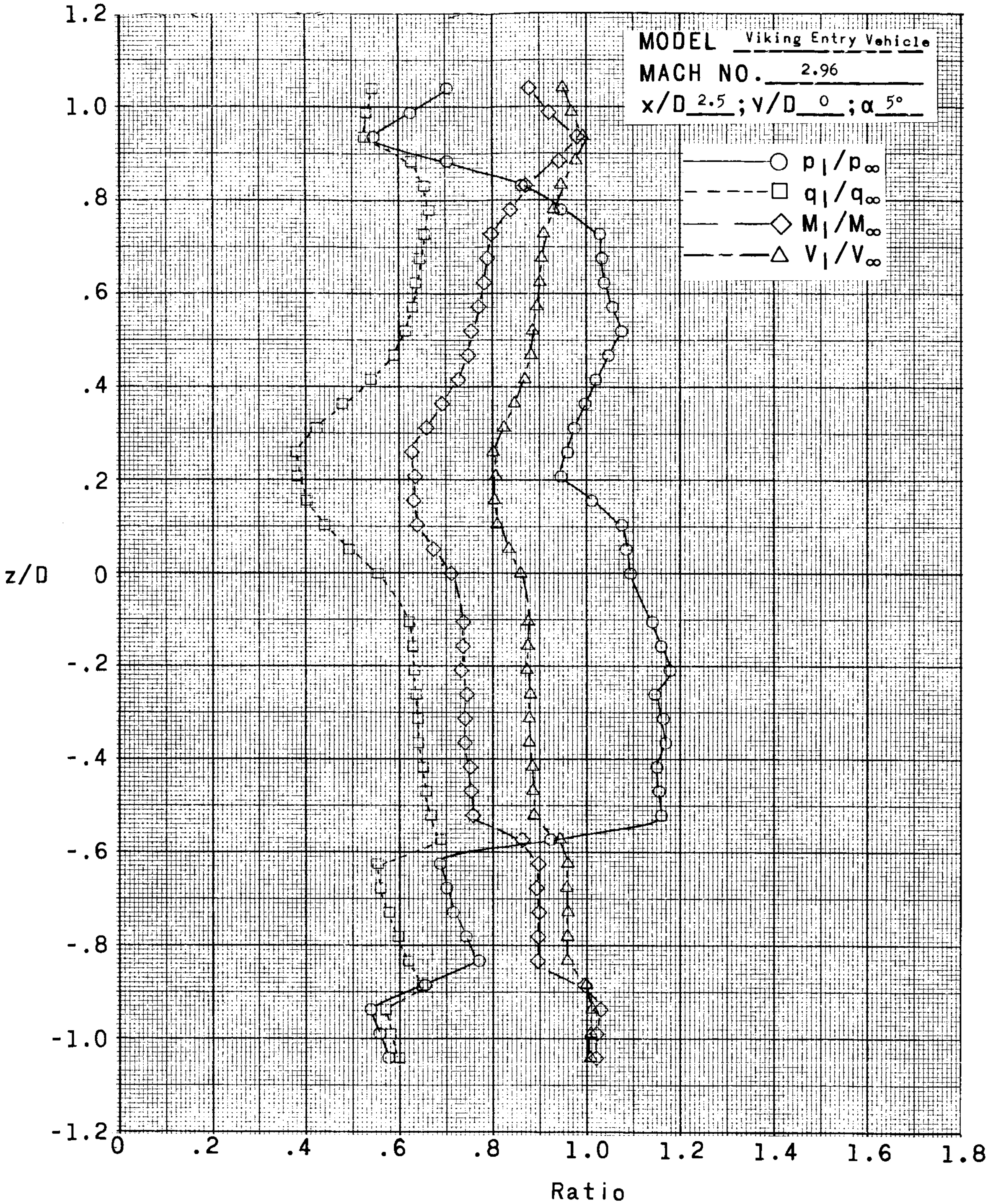
(b) $x/D = 1.5$; $y/D = 0$; $\alpha = 5^{0}$.

Figure 11.- Continued.



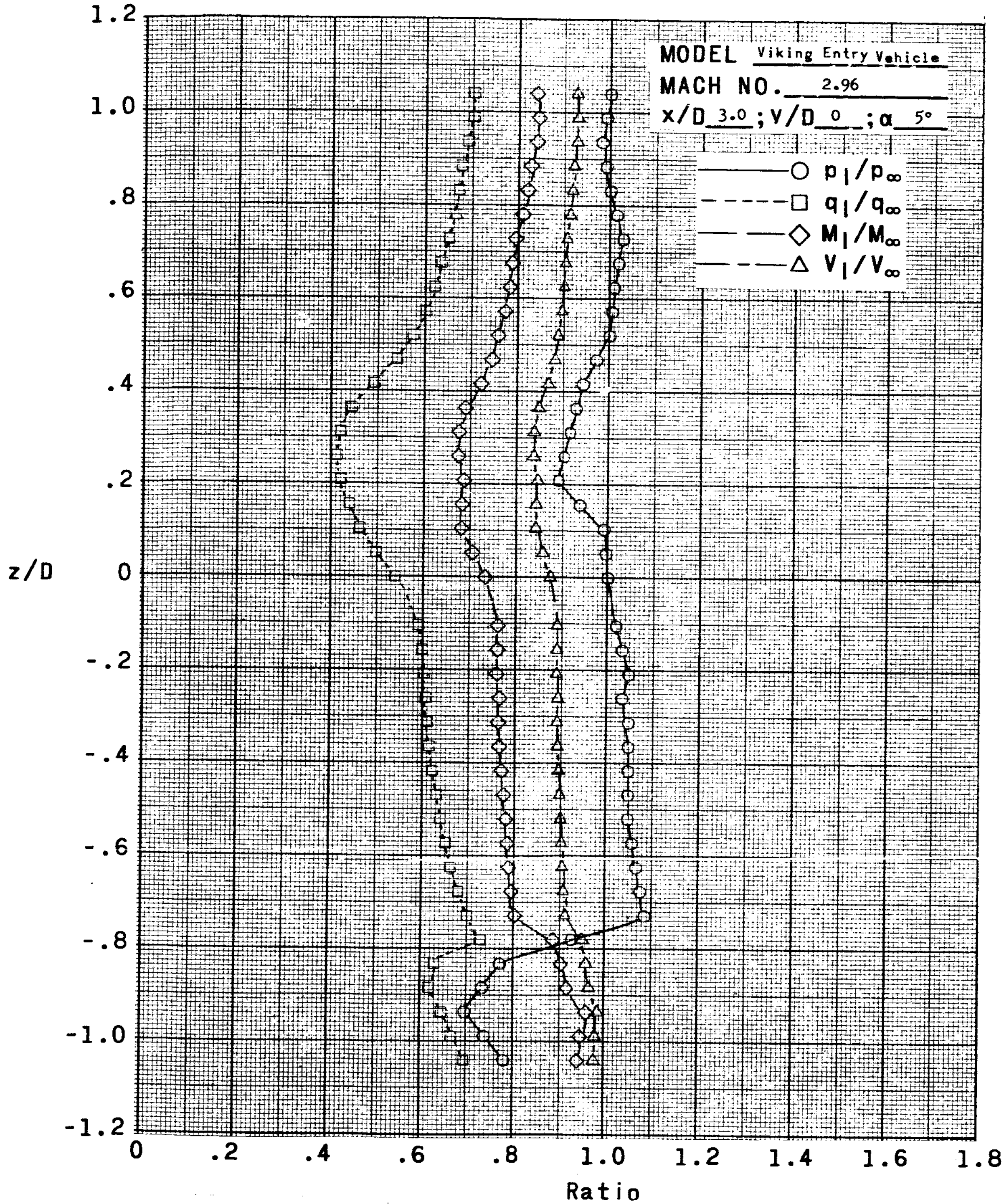
(c) $x/D = 2.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Continued.



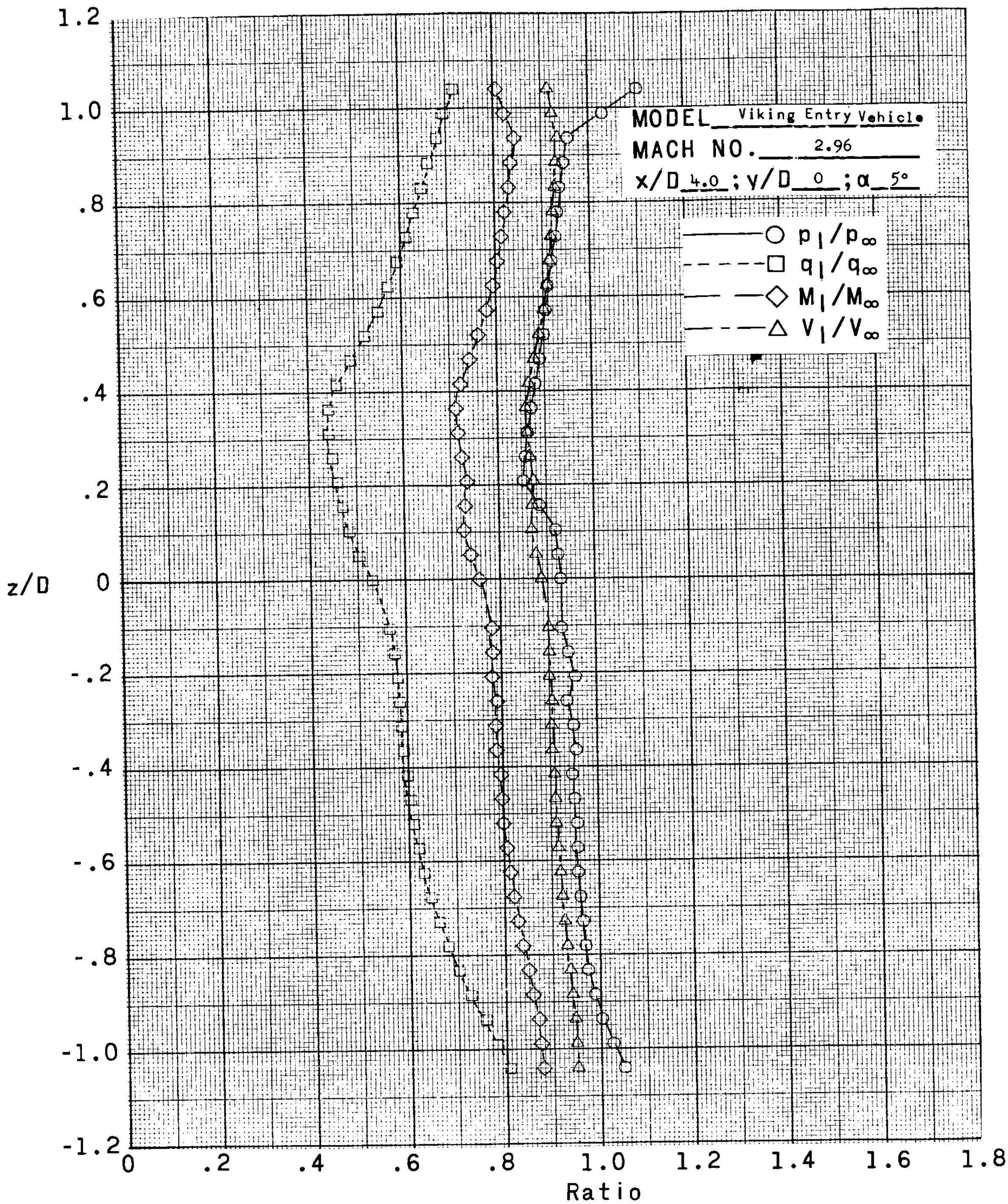
(d) $x/D = 2.5$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Continued.



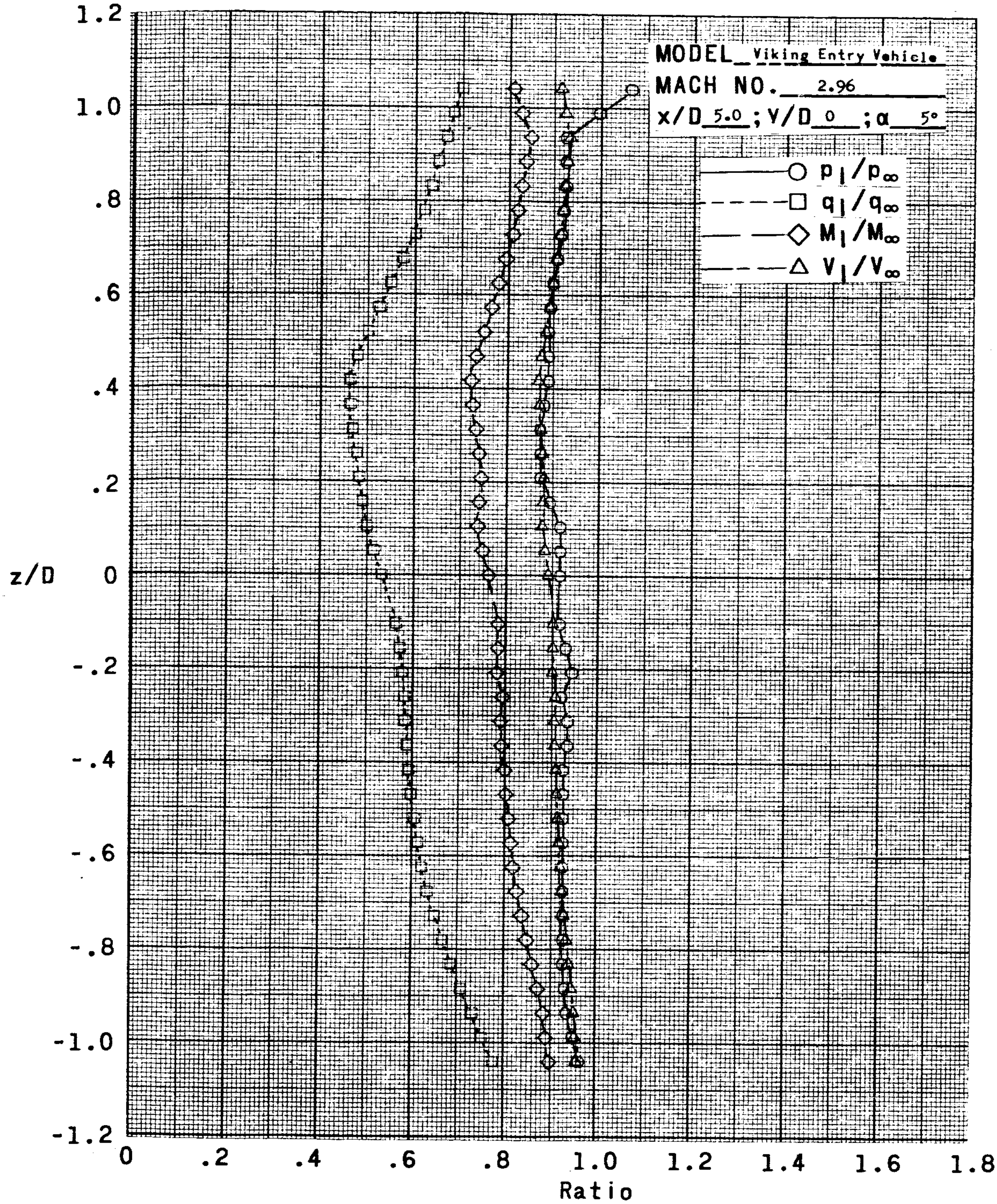
(e) $x/D = 3.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Continued.



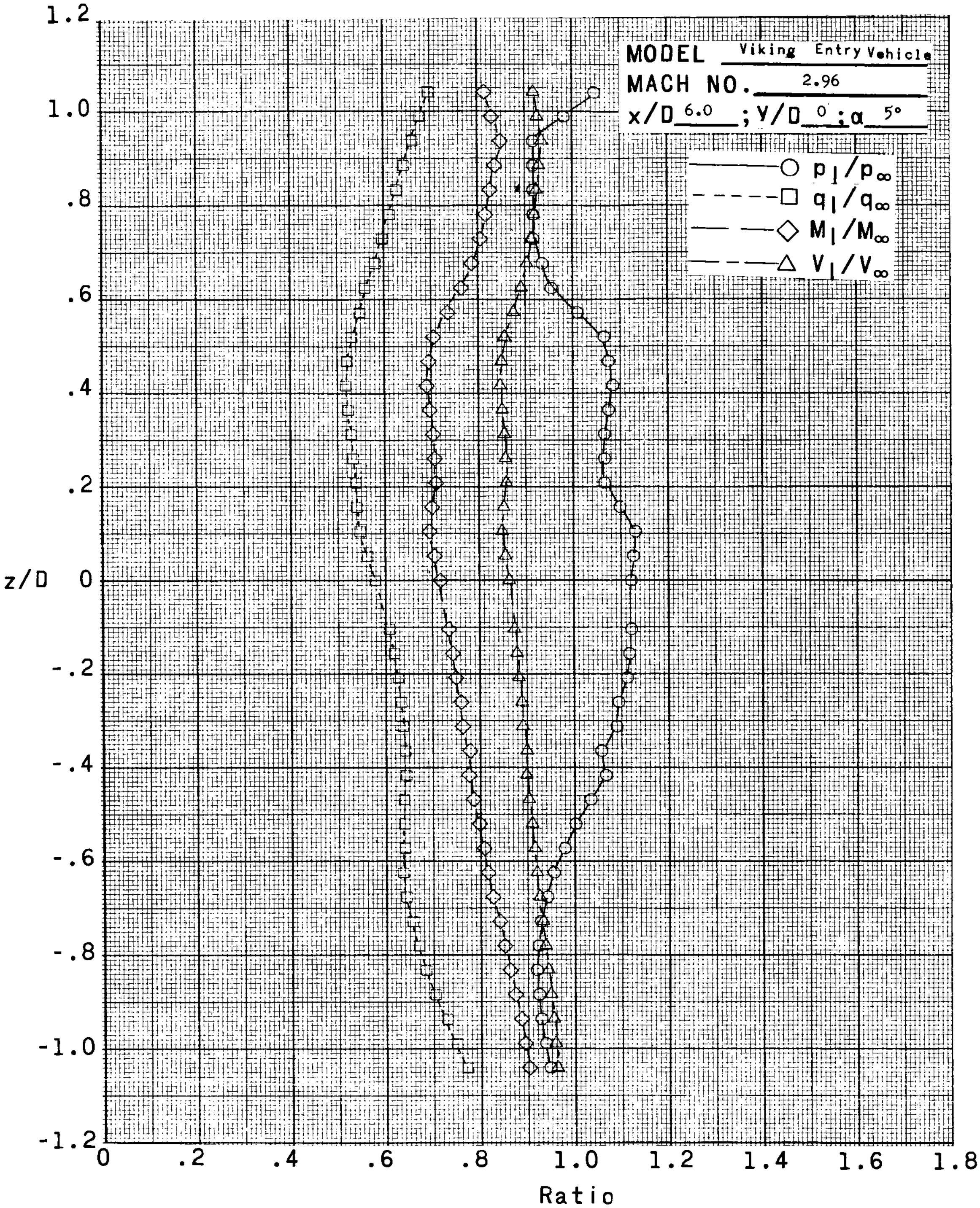
(f) x/D = 4.0; y/D = 0; α = 5°.

Figure 11.- Continued.



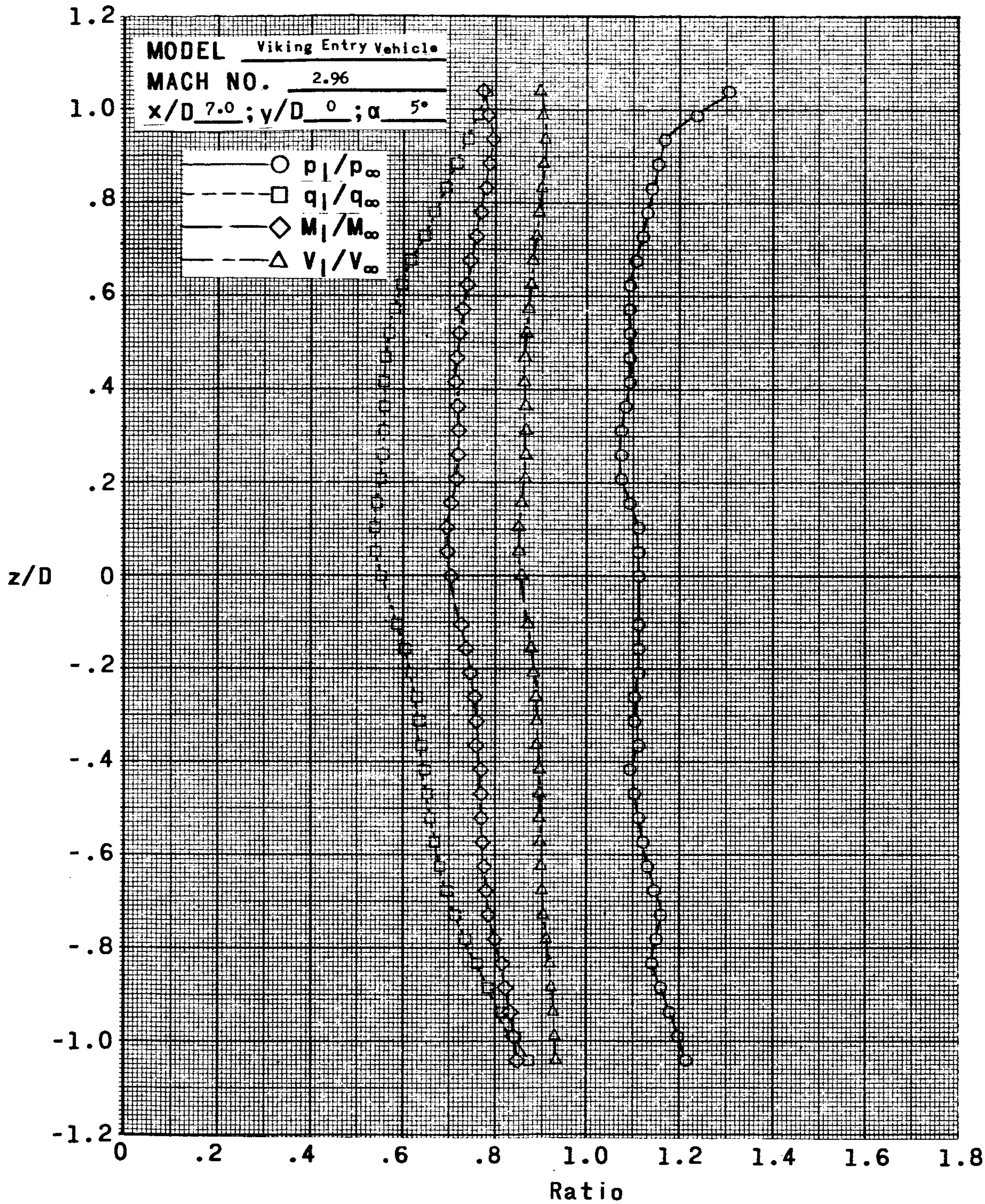
(g) $x/D = 5.0$; $y/D = 0$; $\alpha = 5^{\circ}$.

Figure 11.- Continued.



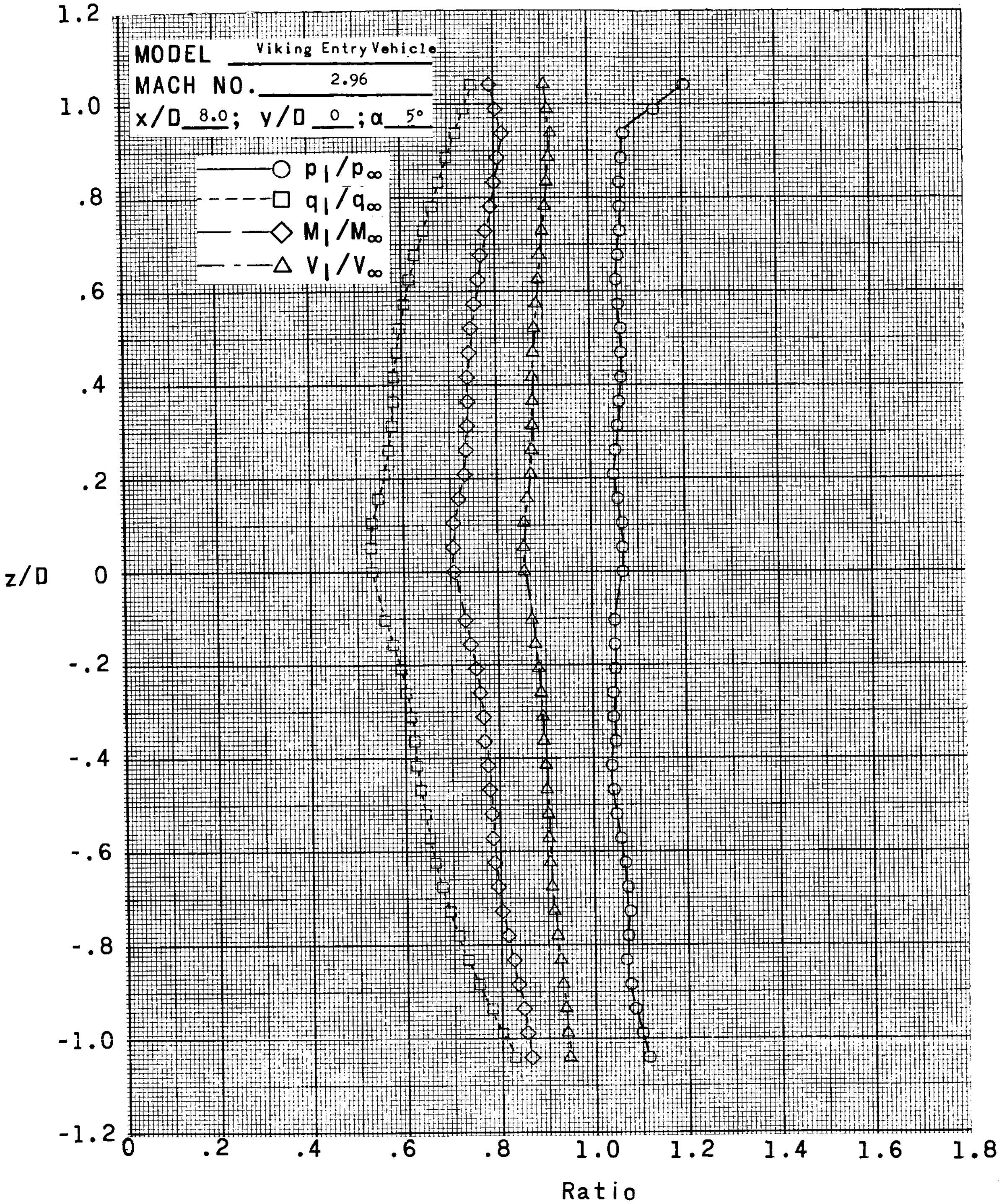
(h) $x/D = 6.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Continued.



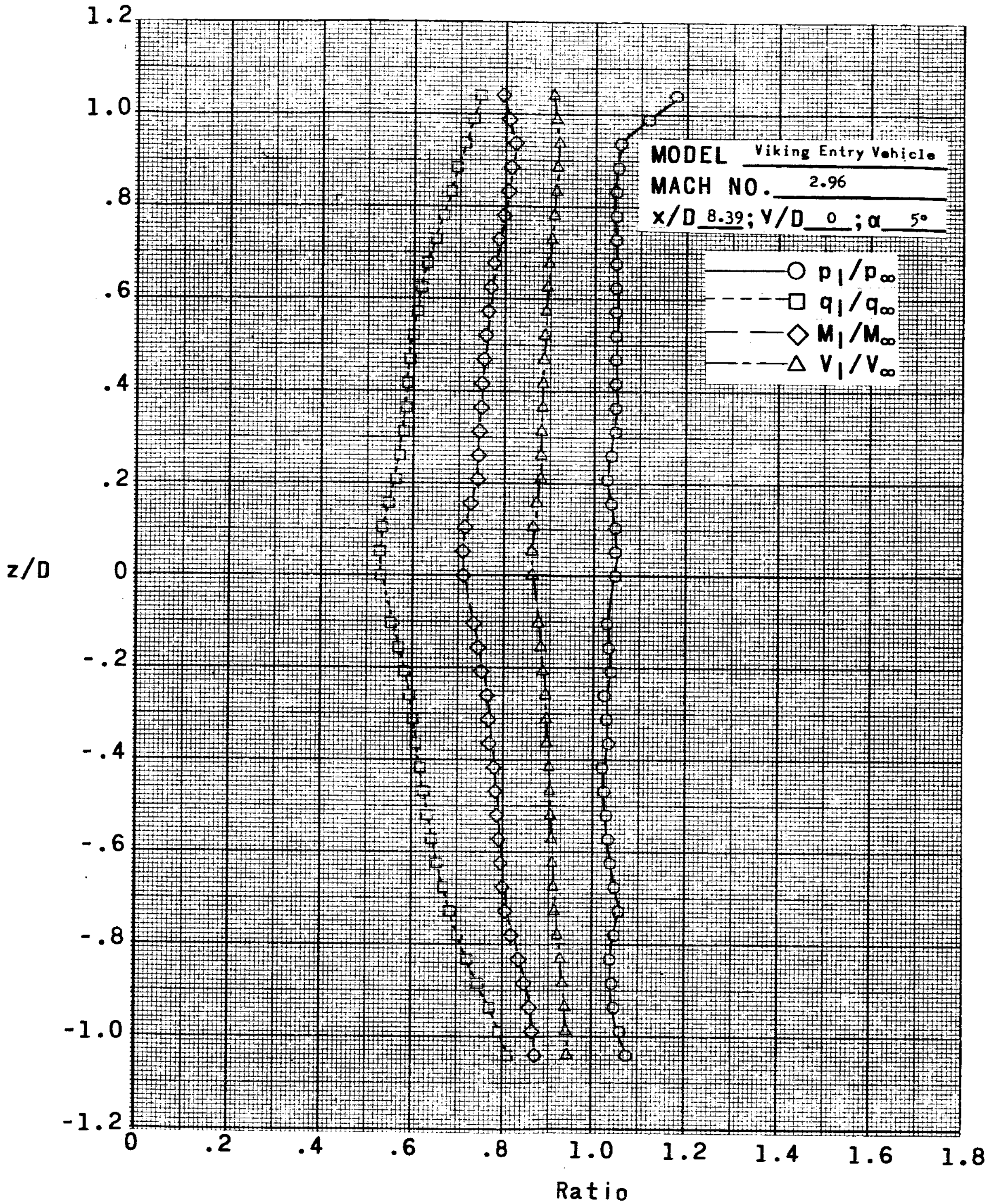
(i) $x/D = 7.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 11.- Continued.



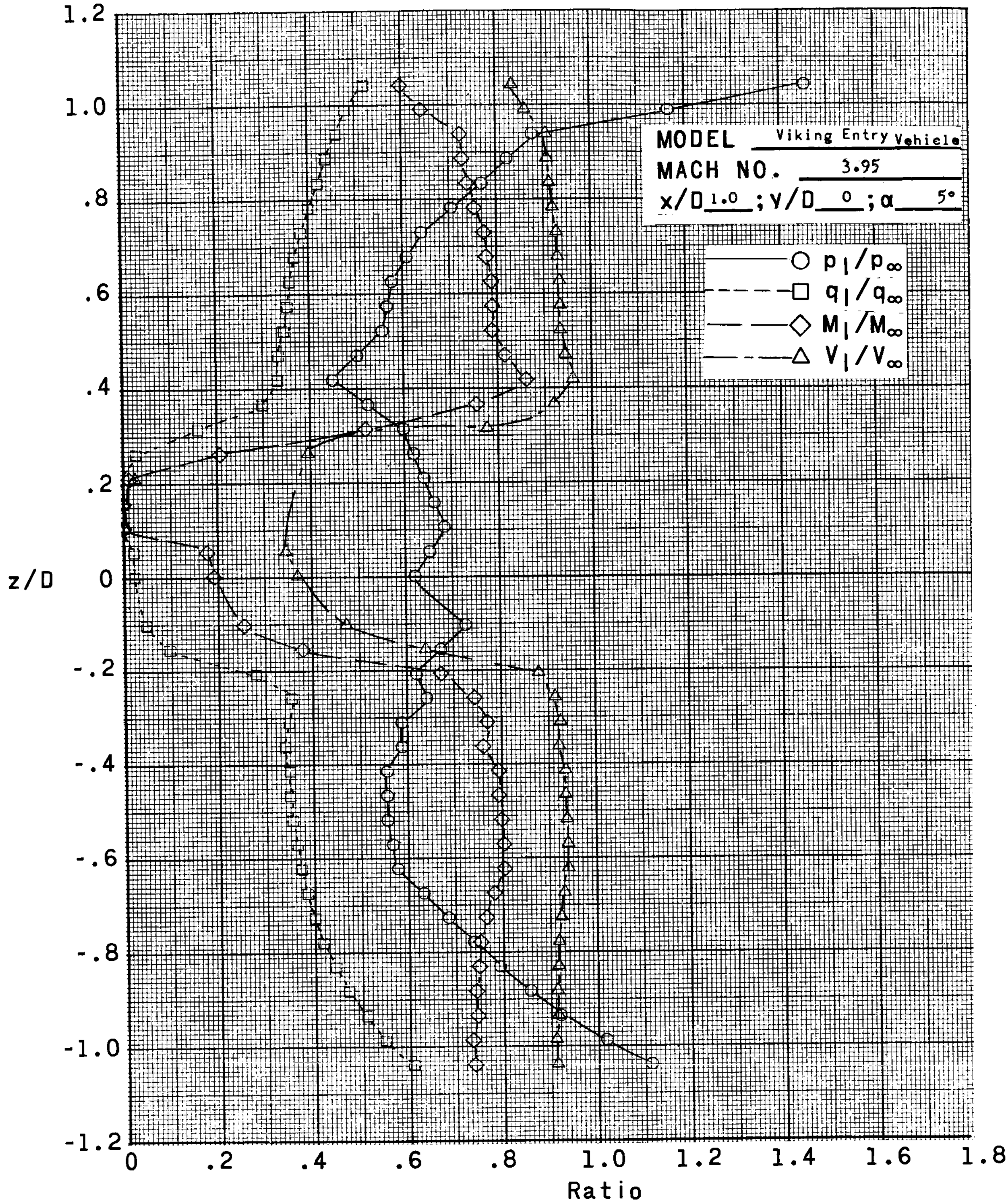
(j) x/D = 8.0; y/D = 0; α = 5°.

Figure 11.- Continued.



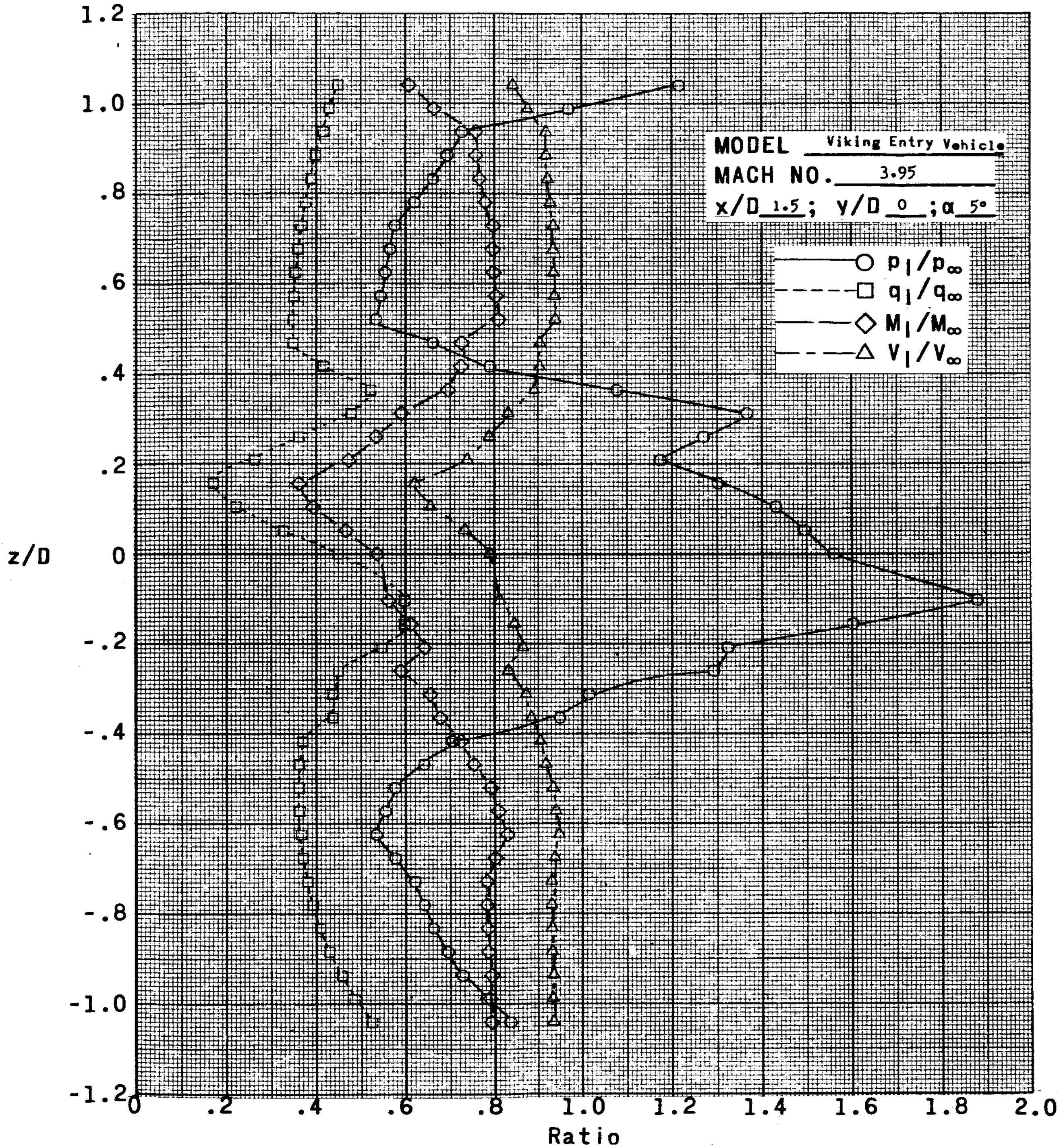
(k) x/D = 8.39; y/D = 0; α = 5°.

Figure 11.- Concluded.



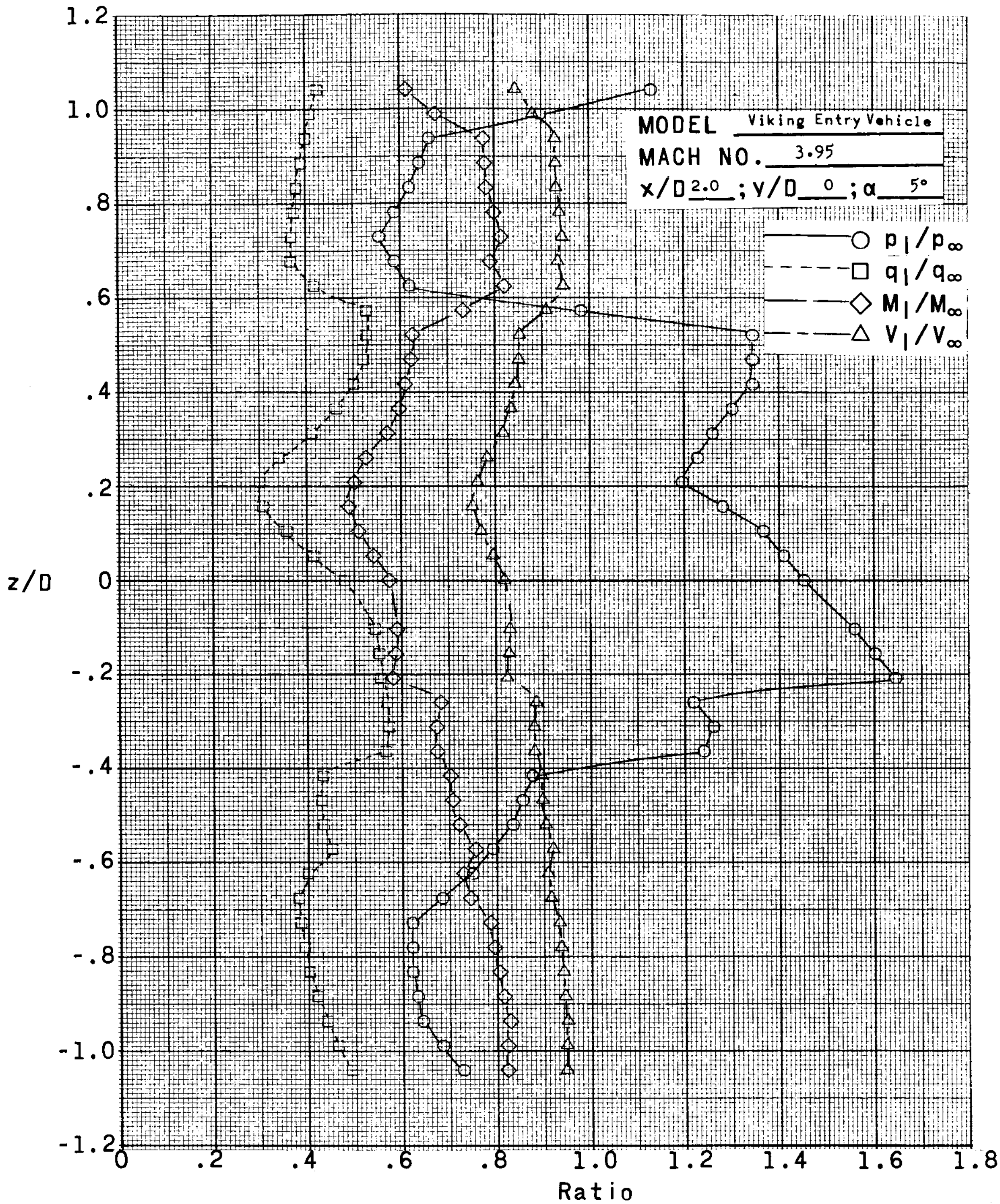
(a) $x/D = 1.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 12.- Variation of p_l/p_∞, q_l/q_∞, M_l/M_∞, and V_l/V_∞ with z/D at the center of wake of the Viking Entry Vehicle at a Mach number of 3.95 and a Reynolds number of 1.65×10^6 per foot (5.42×10^6 per meter).



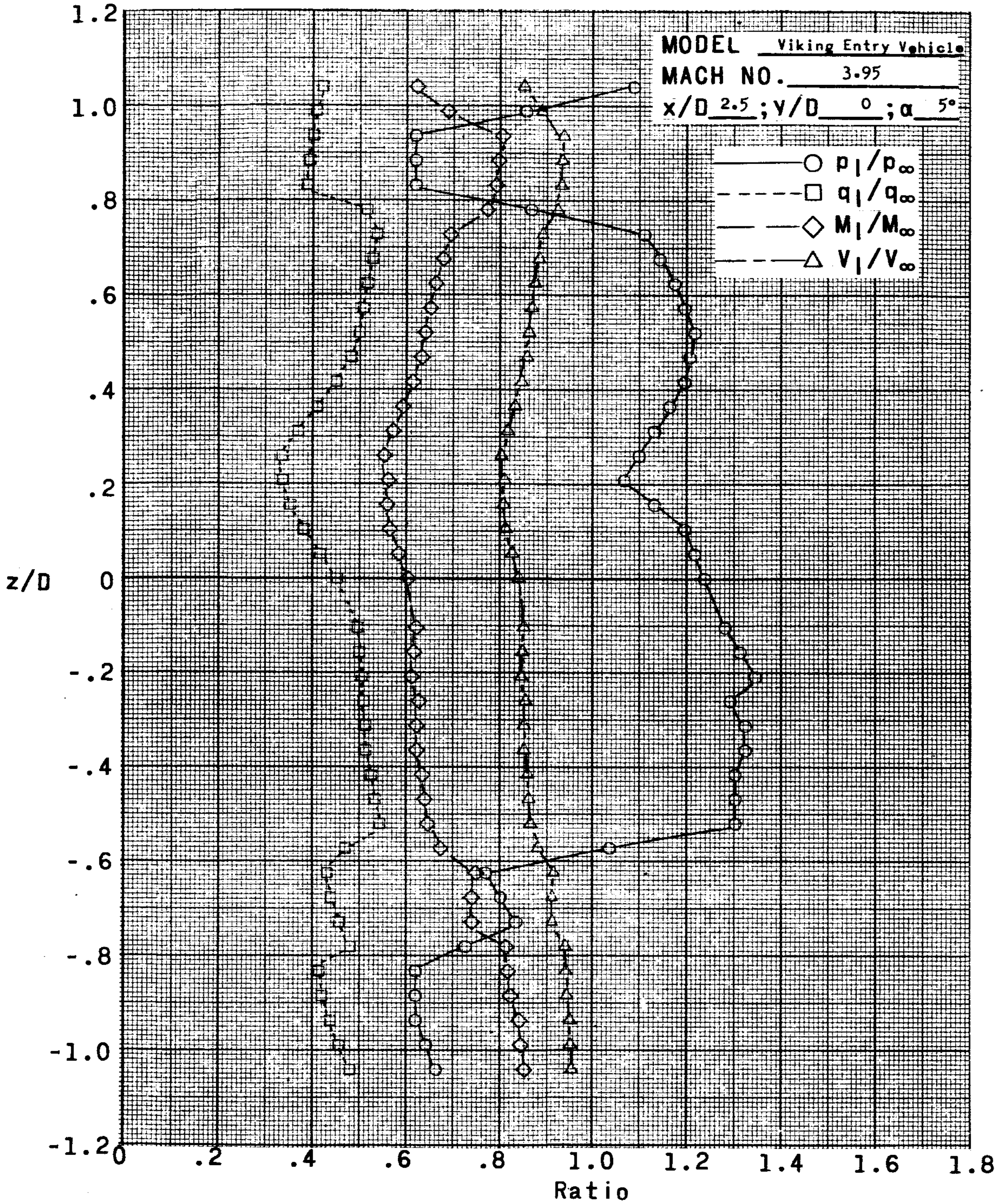
(b) x/D = 1.5; y/D = 0; α = 5°.

Figure 12.- Continued.



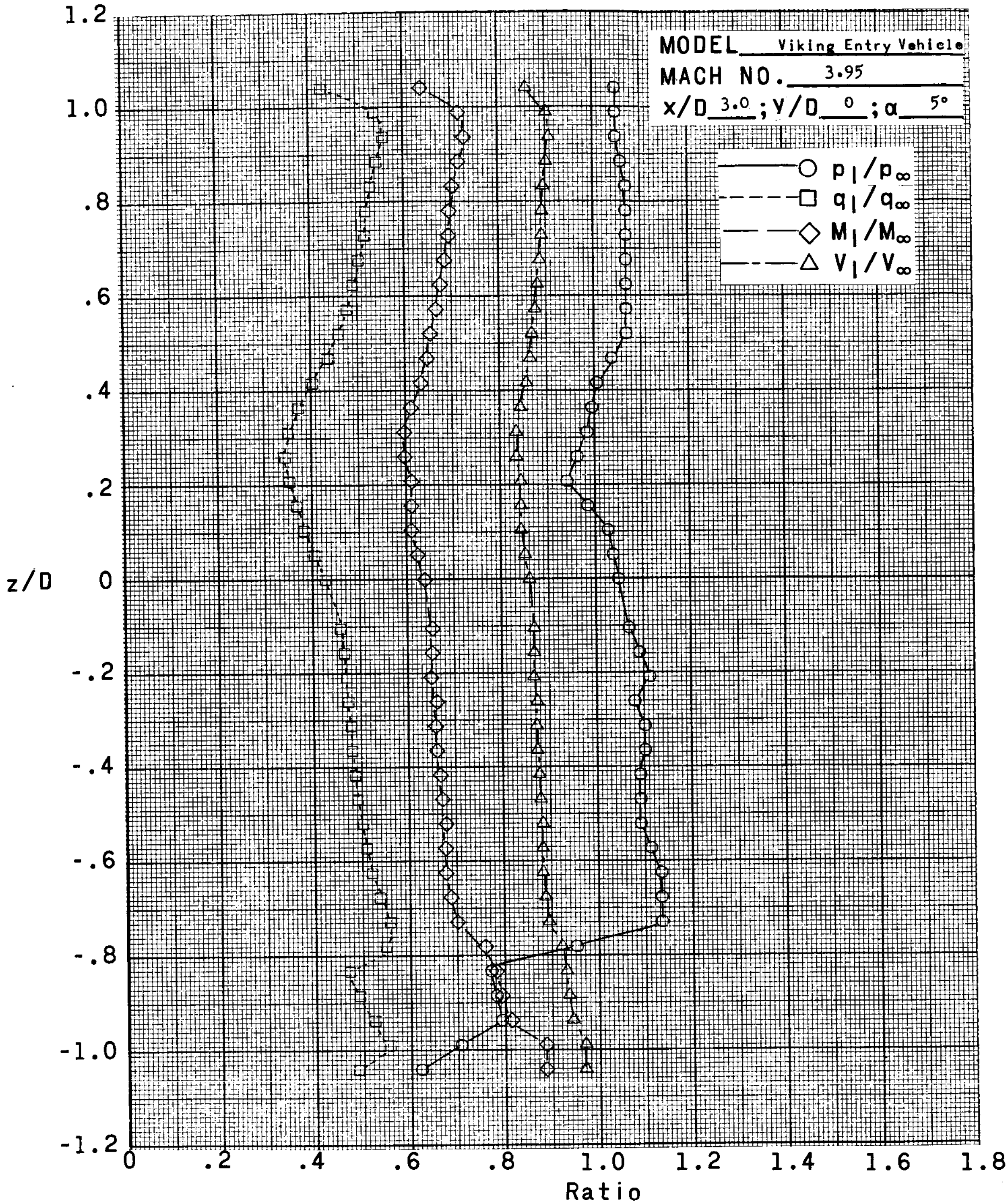
(c) x/D = 2.0; y/D = 0; α = 5°.

Figure 12.- Continued.



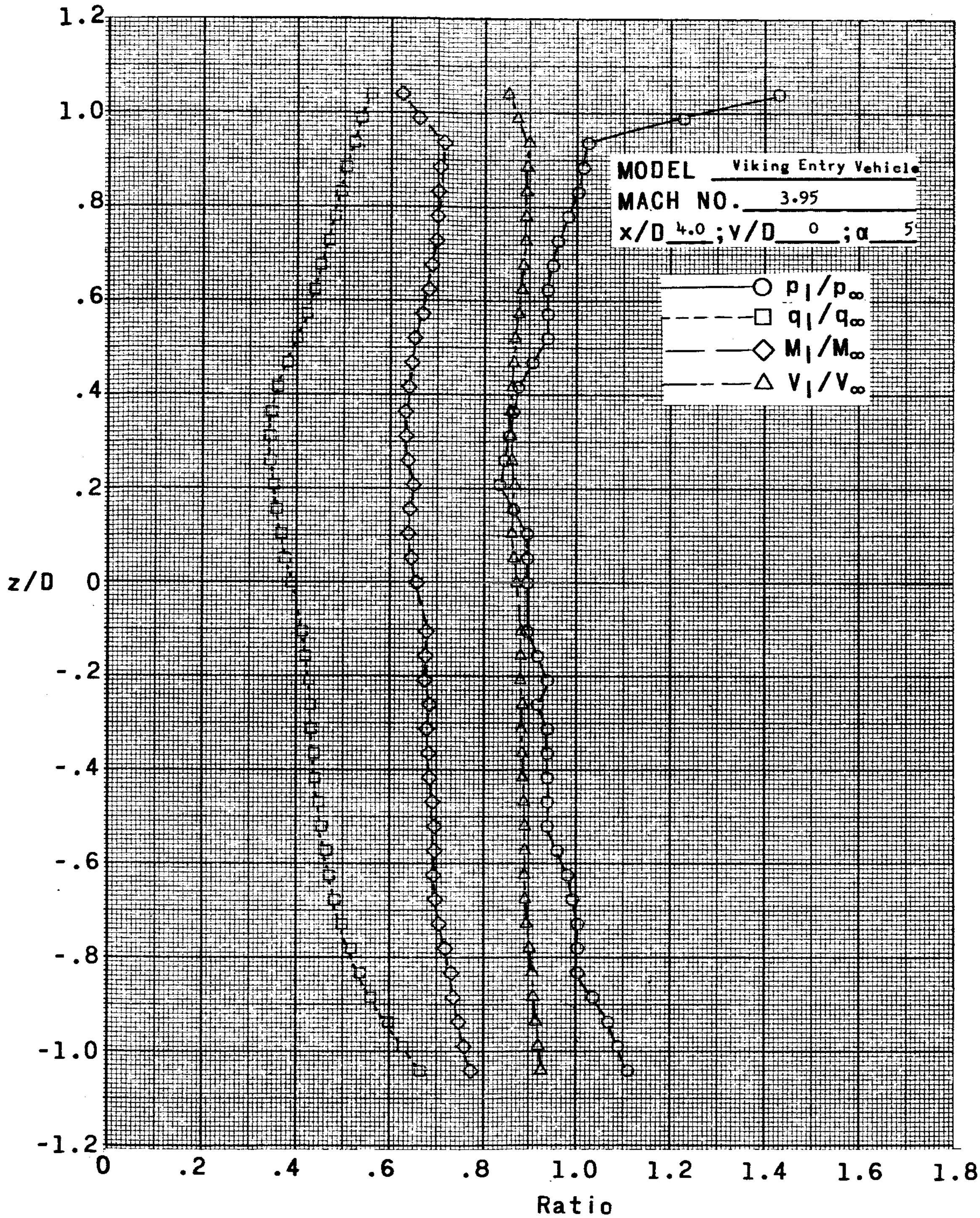
(d) x/D = 2.5; y/D = 0; α = 5°.

Figure 12.- Continued.



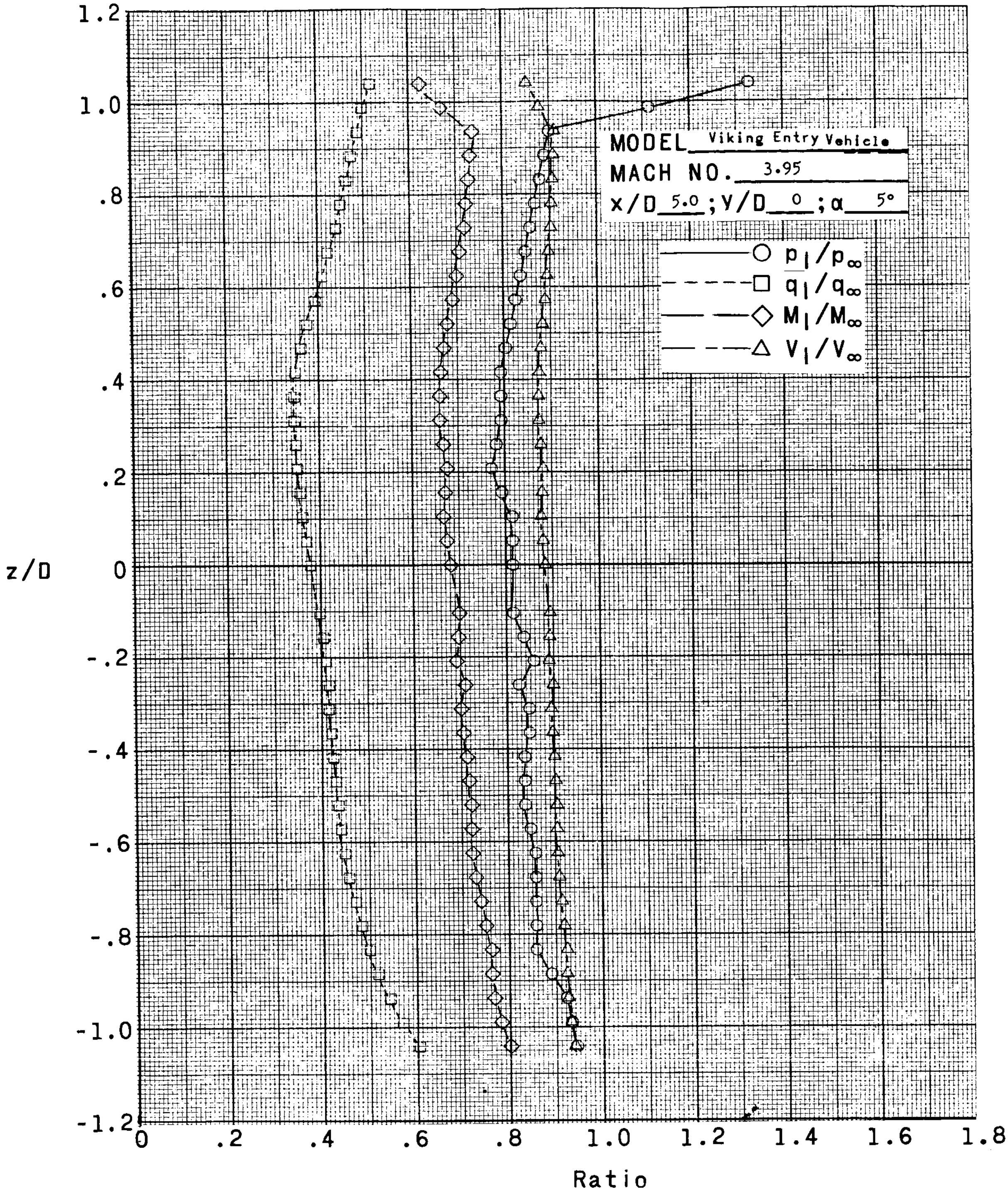
(e) $x/D = 3.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 12.- Continued.



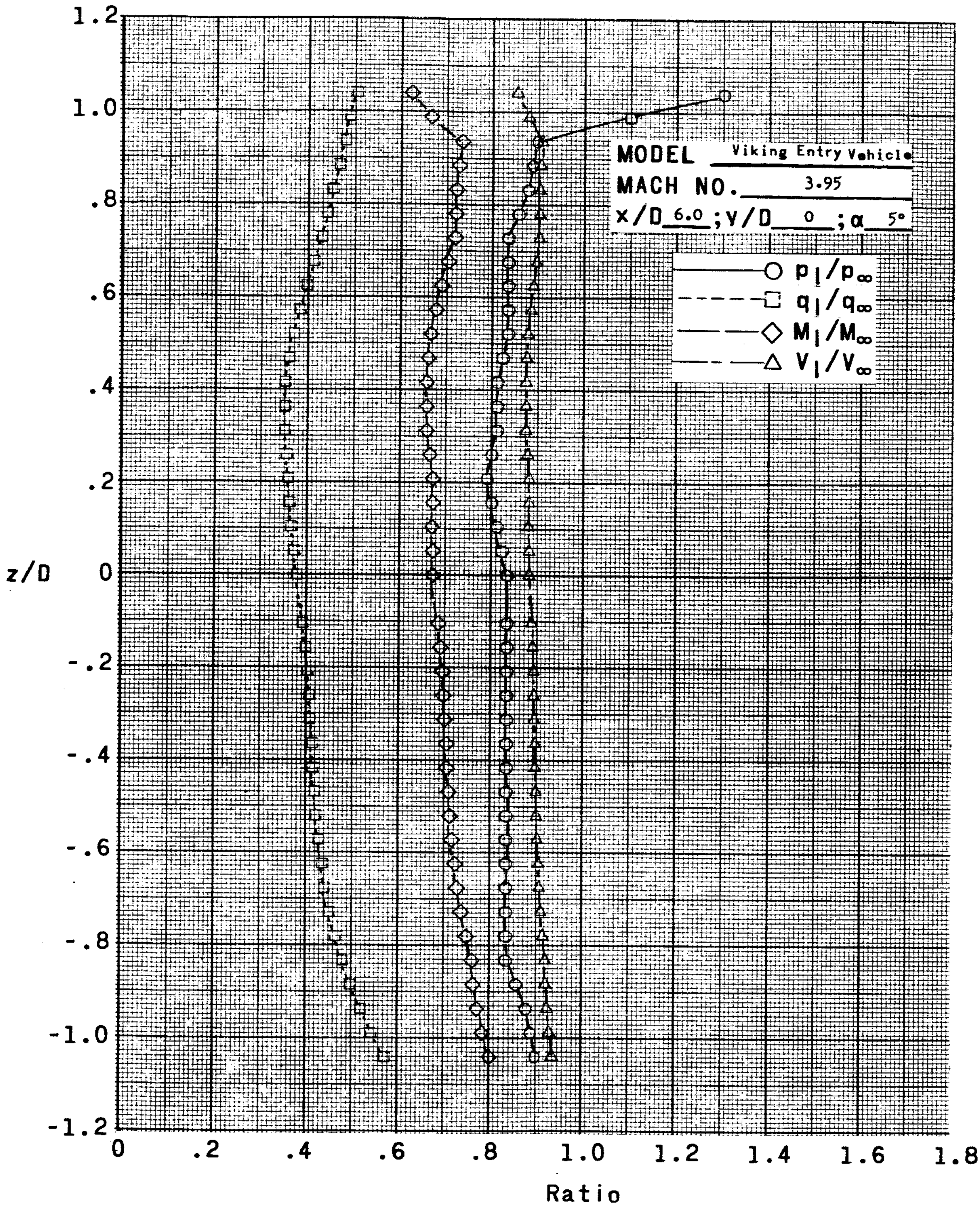
(f) x/D = 4.0; y/D = 0; α = 5°.

Figure 12.- Continued.



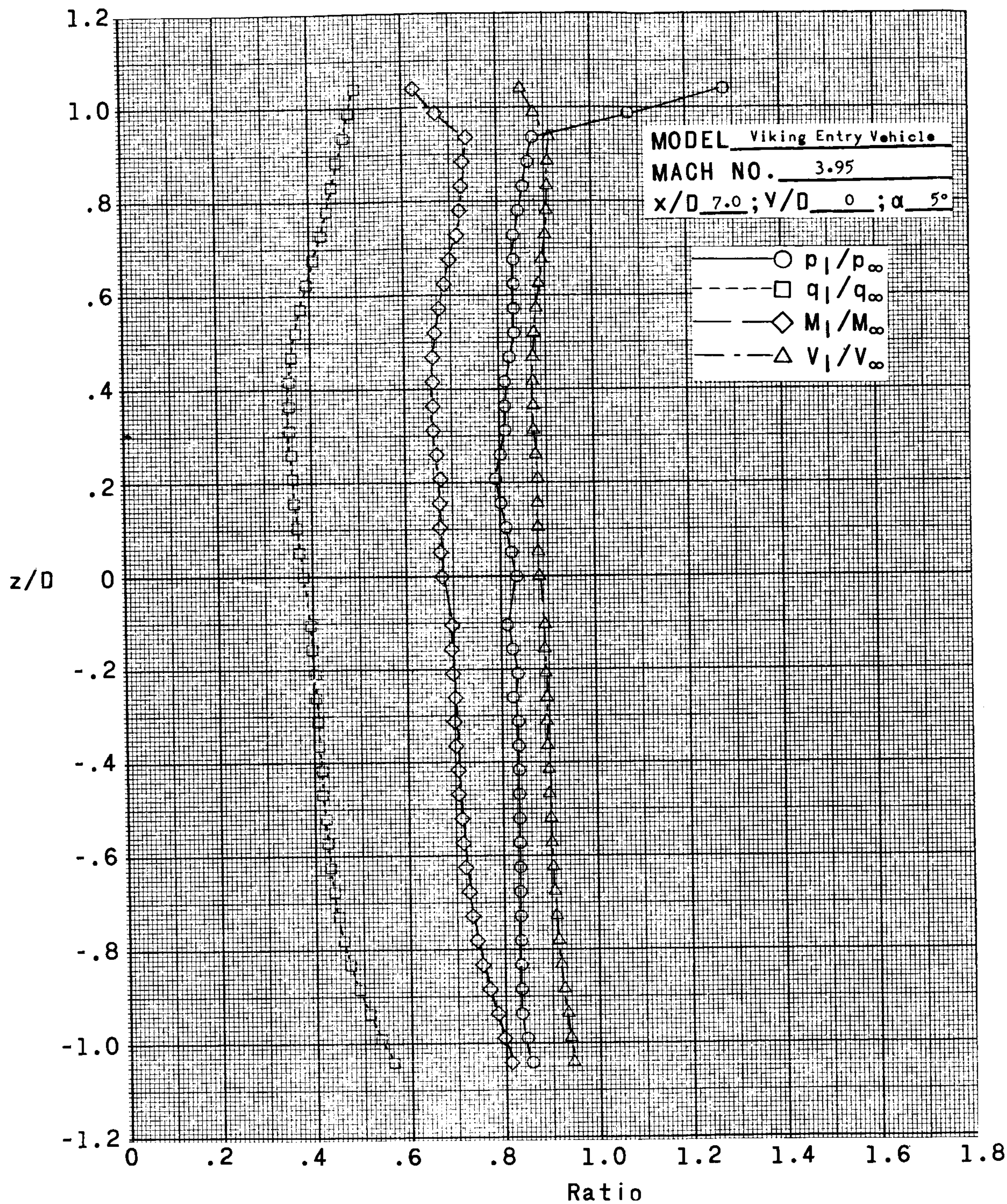
(g) x/D = 5.0; y/D = 0; α = 5°.

Figure 12.- Continued.



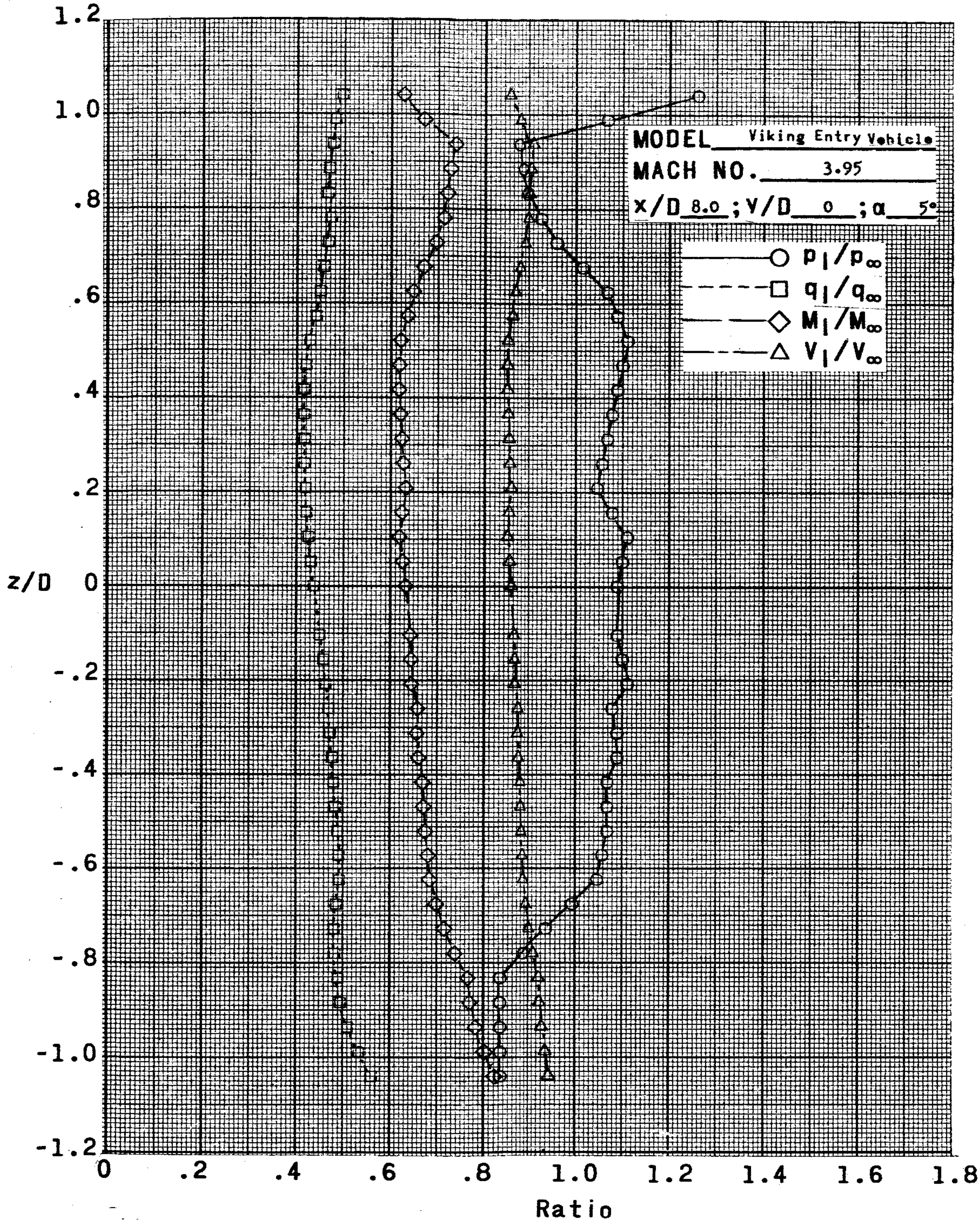
(h) $x/D = 6.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 12.- Continued.



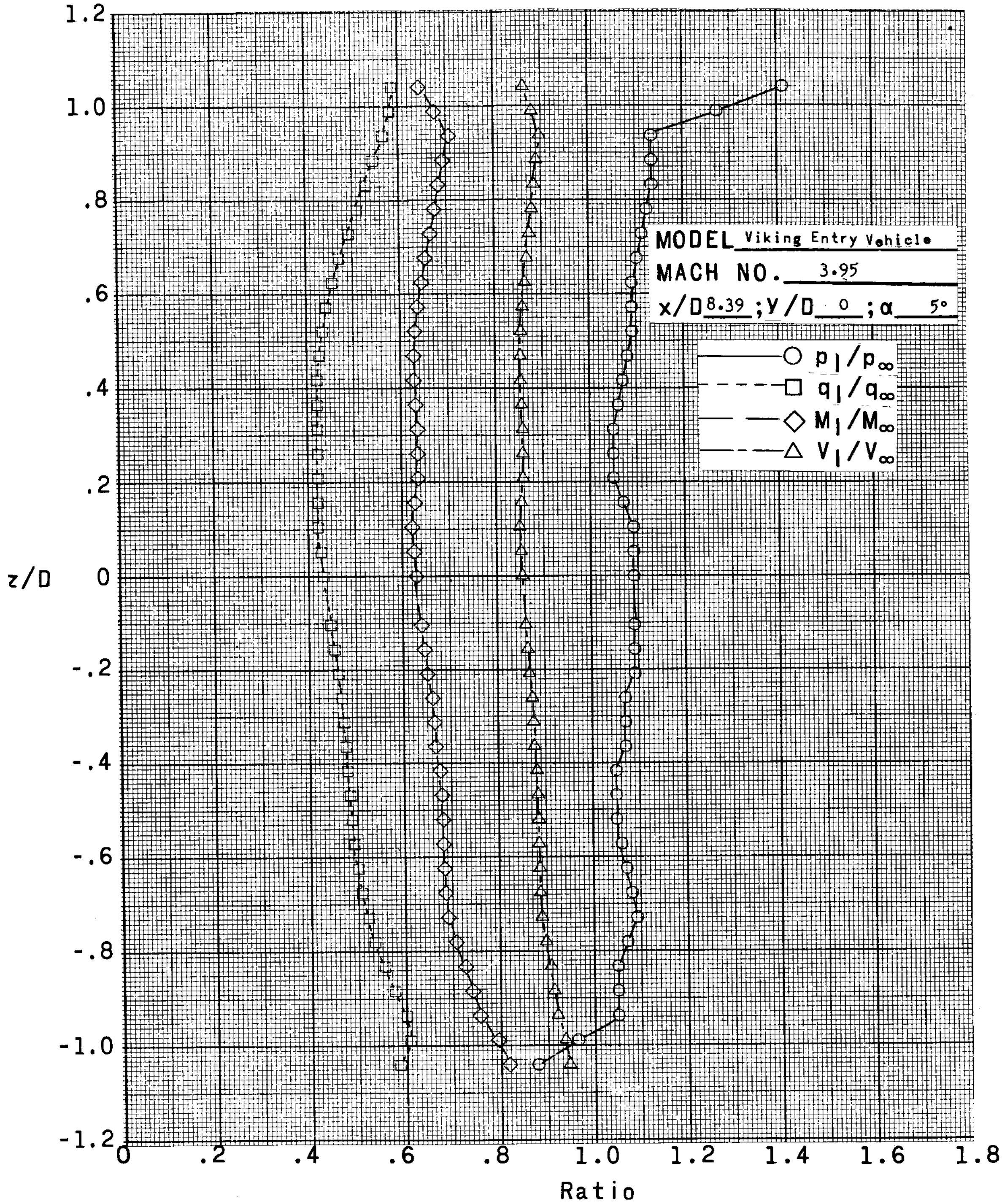
(i) $x/D = 7.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 12.- Continued.



(j) $x/D = 8.0$; $y/D = 0$; $\alpha = 5^0$.

Figure 12.- Continued.



(k) $x/D = 8.39$; $y/D = 0$; $\alpha = 5^{0}$.

Figure 12.- Concluded.

NASA-Langley, 1971 — 12 L-7758